

CRESTONE PEAK RESOURCES

ARAPAHOE COUNTY

SEC 15-T4S-R65W

LONE TREE 4-65 15-16 4BH

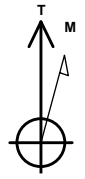
OWB

Plan: PROPOSAL 1

Standard Planning Report

11 February, 2022

Project: ARAPAHOE COUNTY
 Site: SEC 15-T4S-R65W
 Well: LONE TREE 4-65 15-16 4BH
 Wellbore: OWB
 Design: PROPOSAL 1



Azimuths to True North
 Magnetic North: 7.65°
 Magnetic Field
 Strength: 51525.2nT
 Dip Angle: 66.09°
 Date: 2/10/2022
 Model: IGRF2020

WELL DETAILS: LONE TREE 4-65 15-16 4BH

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1683230.10	3241111.13	39.706146°N	104.643032°W	

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	Start Build 2.00
1471.15	24.42	163.39	1434.50	-245.65	73.27	5.41	256.35	Start 6510.93 hold at 1471.15 MD
7982.08	24.42	163.39	7362.82	-2825.42	842.75	62.27	2948.42	Start DLS 10.00 TFO 105.13
8949.68	90.00	269.93	7950.00	-3081.69	274.08	682.08	3635.07	Start 9898.05 hold at 8949.68 MD
18847.73	90.00	269.93	7950.00	-3093.36	-9623.97	10108.89	13533.12	TD at 18847.73

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	1471.15	24.42	163.39	1434.50	-245.65	73.27	2.00	163.39	5.41	
4	7982.08	24.42	163.39	7362.82	-2825.42	842.75	0.00	0.00	62.27	
5	8949.68	90.00	269.93	7950.00	-3081.69	274.08	10.00	105.13	682.08	LP-LT 4-65
6	18847.73	90.00	269.93	7950.00	-3093.36	-9623.97	0.00	0.00	10108.89	PBHL-LT 4

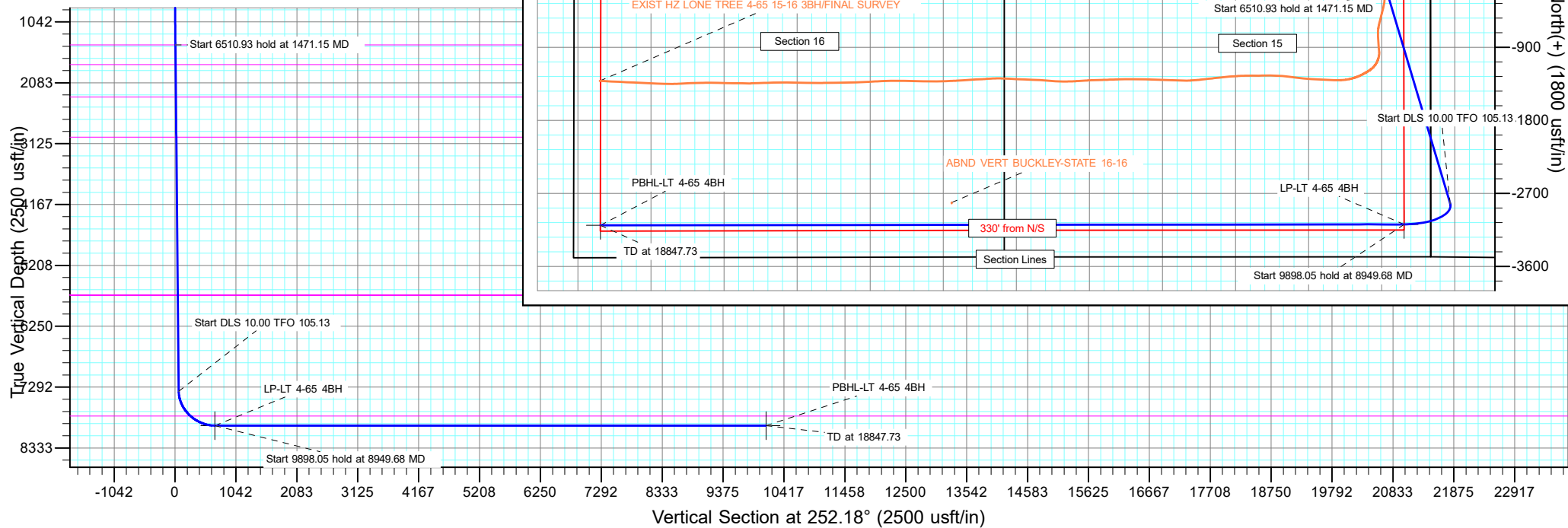
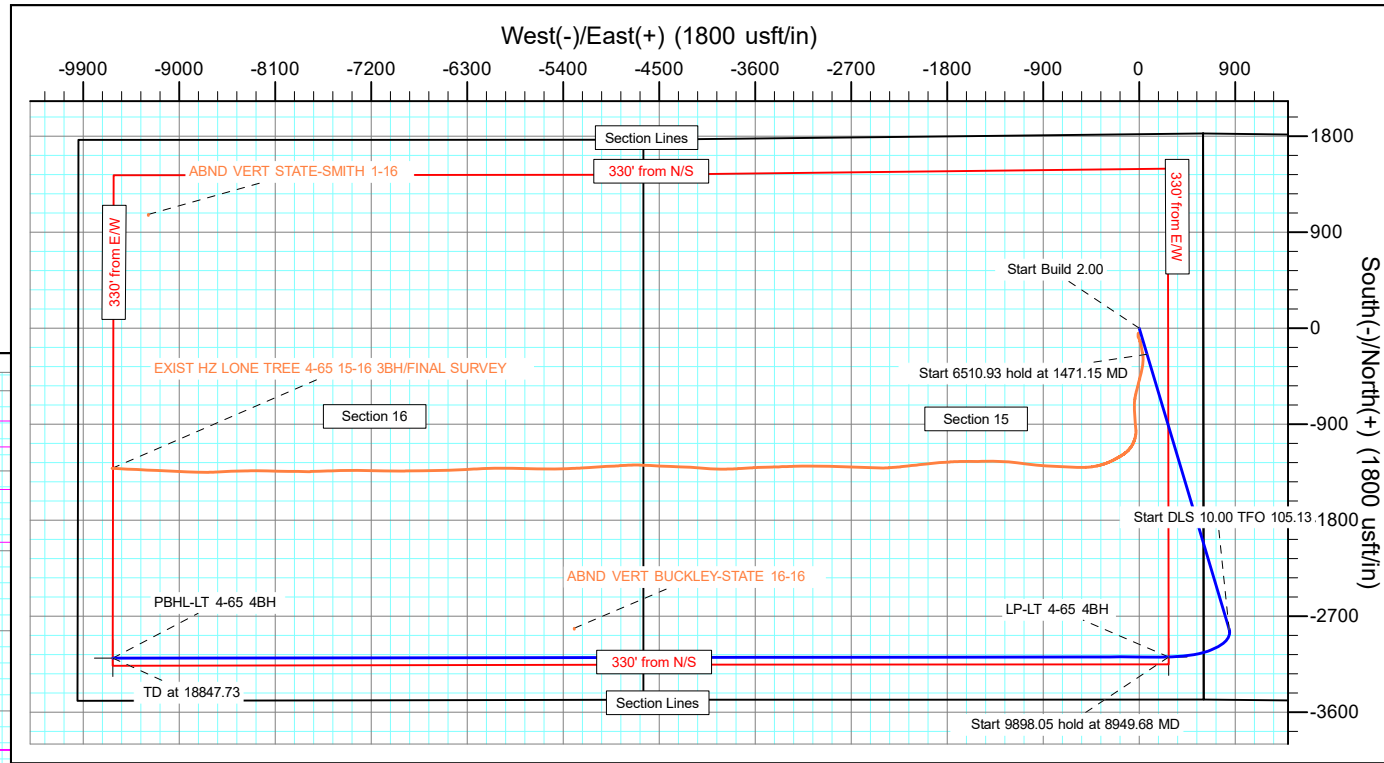
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
LP-LT 4-65 4BH	7950.00	-3081.69	274.08	1680151.16	3241414.26	39.697686°N	104.642058°W	Point
- plan hits target center								
PBHL-LT 4-65 4BH	7950.00	-3093.36	-9623.97	1680046.12	3231516.85	39.697649°N	104.677233°W	Point
- plan hits target center								

PROJECT DETAILS: ARAPAHOE COUNTY

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Central Zone
 System Datum: Mean Sea Level

- SHL:
1819' FNL, 600' FEL
Sec 15-T4S-R65W
- LP:
400' FSL, 330' FEL
Sec 15-T4S-R65W
- BHL:
400' FSL, 330' FWL
Sec 16-T4S-R65W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.30usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.30usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Project ARAPAHOE COUNTY			
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site SEC 15-T4S-R65W			
Site Position:		Northing:	1,685,061.36 usft
From:	Lat/Long	Easting:	3,241,690.88 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	39.711158°N
		Longitude:	104.640910°W
		Grid Convergence:	0.54 °

Well LONE TREE 4-65 15-16 4BH			
Well Position	+N/-S	-1,825.71 usft	Northing: 1,683,230.10 usft
	+E/-W	-597.05 usft	Easting: 3,241,111.13 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:
			Latitude: 39.706146°N
			Longitude: 104.643032°W
			Ground Level: 5,693.30 usft

Wellbore OWB			
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2020	2/10/2022	7.65
			Dip Angle (°) 66.09
			Field Strength (nT) 51,525.17044212

Design PROPOSAL 1			
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°) 252.18

Plan Survey Tool Program		Date 2/11/2022	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name
1	0.00	18,847.73 PROPOSAL 1 (OWB)	MWD OWSG
			OWSG MWD - Standard
			Remarks

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,471.15	24.42	163.39	1,434.50	-245.65	73.27	2.00	2.00	0.00	163.39	
7,982.08	24.42	163.39	7,362.82	-2,825.42	842.75	0.00	0.00	0.00	0.00	
8,949.68	90.00	269.93	7,950.00	-3,081.69	274.08	10.00	6.78	11.01	105.13	LP-LT 4-65 4BH
18,847.73	90.00	269.93	7,950.00	-3,093.36	-9,623.97	0.00	0.00	0.00	0.00	PBHL-LT 4-65 4BH

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.30usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.30usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
300.00	1.00	163.39	300.00	-0.42	0.12	0.01	2.00	2.00	0.00	
400.00	3.00	163.39	399.93	-3.76	1.12	0.08	2.00	2.00	0.00	
500.00	5.00	163.39	499.68	-10.45	3.12	0.23	2.00	2.00	0.00	
600.00	7.00	163.39	599.13	-20.46	6.10	0.45	2.00	2.00	0.00	
700.00	9.00	163.39	698.15	-33.80	10.08	0.74	2.00	2.00	0.00	
800.00	11.00	163.39	796.63	-50.44	15.04	1.11	2.00	2.00	0.00	
900.00	13.00	163.39	894.44	-70.36	20.99	1.55	2.00	2.00	0.00	
1,000.00	15.00	163.39	991.46	-93.54	27.90	2.06	2.00	2.00	0.00	
1,100.00	17.00	163.39	1,087.58	-119.96	35.78	2.64	2.00	2.00	0.00	
1,200.00	19.00	163.39	1,182.68	-149.57	44.61	3.30	2.00	2.00	0.00	
1,300.00	21.00	163.39	1,276.65	-182.34	54.39	4.02	2.00	2.00	0.00	
1,400.00	23.00	163.39	1,369.36	-218.24	65.09	4.81	2.00	2.00	0.00	
1,470.60	24.41	163.39	1,434.00	-245.43	73.21	5.41	2.00	2.00	0.00	
Laramie										
1,471.15	24.42	163.39	1,434.50	-245.65	73.27	5.41	2.00	2.00	0.00	
Start 6510.93 hold at 1471.15 MD										
1,500.00	24.42	163.39	1,460.77	-257.08	76.68	5.67	0.00	0.00	0.00	
1,600.00	24.42	163.39	1,551.82	-296.71	88.50	6.54	0.00	0.00	0.00	
1,700.00	24.42	163.39	1,642.88	-336.33	100.32	7.41	0.00	0.00	0.00	
1,800.00	24.42	163.39	1,733.93	-375.95	112.14	8.29	0.00	0.00	0.00	
1,841.81	24.42	163.39	1,772.00	-392.52	117.08	8.65	0.00	0.00	0.00	
Fox Hills										
1,900.00	24.42	163.39	1,824.98	-415.57	123.95	9.16	0.00	0.00	0.00	
2,000.00	24.42	163.39	1,916.03	-455.19	135.77	10.03	0.00	0.00	0.00	
2,100.00	24.42	163.39	2,007.08	-494.82	147.59	10.90	0.00	0.00	0.00	
2,200.00	24.42	163.39	2,098.13	-534.44	159.41	11.78	0.00	0.00	0.00	
2,300.00	24.42	163.39	2,189.19	-574.06	171.23	12.65	0.00	0.00	0.00	
2,400.00	24.42	163.39	2,280.24	-613.68	183.05	13.52	0.00	0.00	0.00	
2,449.16	24.42	163.39	2,325.00	-633.16	188.86	13.95	0.00	0.00	0.00	
Upper Pierre aquifer										
2,500.00	24.42	163.39	2,371.29	-653.30	194.86	14.40	0.00	0.00	0.00	
2,600.00	24.42	163.39	2,462.34	-692.93	206.68	15.27	0.00	0.00	0.00	
2,700.00	24.42	163.39	2,553.39	-732.55	218.50	16.14	0.00	0.00	0.00	
2,800.00	24.42	163.39	2,644.45	-772.17	230.32	17.02	0.00	0.00	0.00	
2,900.00	24.42	163.39	2,735.50	-811.79	242.14	17.89	0.00	0.00	0.00	
3,000.00	24.42	163.39	2,826.55	-851.42	253.96	18.76	0.00	0.00	0.00	
3,100.00	24.42	163.39	2,917.60	-891.04	265.77	19.64	0.00	0.00	0.00	
3,200.00	24.42	163.39	3,008.65	-930.66	277.59	20.51	0.00	0.00	0.00	
3,204.77	24.42	163.39	3,013.00	-932.55	278.16	20.55	0.00	0.00	0.00	
Base of Upper Pierre aquifer										
3,300.00	24.42	163.39	3,099.70	-970.28	289.41	21.38	0.00	0.00	0.00	
3,400.00	24.42	163.39	3,190.76	-1,009.90	301.23	22.26	0.00	0.00	0.00	
3,500.00	24.42	163.39	3,281.81	-1,049.53	313.05	23.13	0.00	0.00	0.00	
3,600.00	24.42	163.39	3,372.86	-1,089.15	324.86	24.00	0.00	0.00	0.00	
3,700.00	24.42	163.39	3,463.91	-1,128.77	336.68	24.88	0.00	0.00	0.00	
3,800.00	24.42	163.39	3,554.96	-1,168.39	348.50	25.75	0.00	0.00	0.00	
3,900.00	24.42	163.39	3,646.01	-1,208.01	360.32	26.62	0.00	0.00	0.00	
4,000.00	24.42	163.39	3,737.07	-1,247.64	372.14	27.50	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.30usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.30usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,100.00	24.42	163.39	3,828.12	-1,287.26	383.96	28.37	0.00	0.00	0.00	
4,200.00	24.42	163.39	3,919.17	-1,326.88	395.77	29.24	0.00	0.00	0.00	
4,300.00	24.42	163.39	4,010.22	-1,366.50	407.59	30.11	0.00	0.00	0.00	
4,400.00	24.42	163.39	4,101.27	-1,406.12	419.41	30.99	0.00	0.00	0.00	
4,500.00	24.42	163.39	4,192.33	-1,445.75	431.23	31.86	0.00	0.00	0.00	
4,600.00	24.42	163.39	4,283.38	-1,485.37	443.05	32.73	0.00	0.00	0.00	
4,700.00	24.42	163.39	4,374.43	-1,524.99	454.87	33.61	0.00	0.00	0.00	
4,800.00	24.42	163.39	4,465.48	-1,564.61	466.68	34.48	0.00	0.00	0.00	
4,900.00	24.42	163.39	4,556.53	-1,604.23	478.50	35.35	0.00	0.00	0.00	
5,000.00	24.42	163.39	4,647.58	-1,643.86	490.32	36.23	0.00	0.00	0.00	
5,100.00	24.42	163.39	4,738.64	-1,683.48	502.14	37.10	0.00	0.00	0.00	
5,200.00	24.42	163.39	4,829.69	-1,723.10	513.96	37.97	0.00	0.00	0.00	
5,300.00	24.42	163.39	4,920.74	-1,762.72	525.77	38.85	0.00	0.00	0.00	
5,400.00	24.42	163.39	5,011.79	-1,802.34	537.59	39.72	0.00	0.00	0.00	
5,500.00	24.42	163.39	5,102.84	-1,841.97	549.41	40.59	0.00	0.00	0.00	
5,600.00	24.42	163.39	5,193.89	-1,881.59	561.23	41.47	0.00	0.00	0.00	
5,700.00	24.42	163.39	5,284.95	-1,921.21	573.05	42.34	0.00	0.00	0.00	
5,800.00	24.42	163.39	5,376.00	-1,960.83	584.87	43.21	0.00	0.00	0.00	
5,900.00	24.42	163.39	5,467.05	-2,000.45	596.68	44.09	0.00	0.00	0.00	
6,000.00	24.42	163.39	5,558.10	-2,040.08	608.50	44.96	0.00	0.00	0.00	
6,100.00	24.42	163.39	5,649.15	-2,079.70	620.32	45.83	0.00	0.00	0.00	
6,173.42	24.42	163.39	5,716.00	-2,108.79	629.00	46.47	0.00	0.00	0.00	
Terry ("Sussex") - Hygiene ("Shannon") - Mitten - Mitten Marker 1 - Teepee Buttes - Mitten Marker 2 - Sharon Springs										
6,200.00	24.42	163.39	5,740.21	-2,119.32	632.14	46.71	0.00	0.00	0.00	
6,300.00	24.42	163.39	5,831.26	-2,158.94	643.96	47.58	0.00	0.00	0.00	
6,400.00	24.42	163.39	5,922.31	-2,198.56	655.78	48.45	0.00	0.00	0.00	
6,500.00	24.42	163.39	6,013.36	-2,238.19	667.59	49.32	0.00	0.00	0.00	
6,600.00	24.42	163.39	6,104.41	-2,277.81	679.41	50.20	0.00	0.00	0.00	
6,700.00	24.42	163.39	6,195.46	-2,317.43	691.23	51.07	0.00	0.00	0.00	
6,800.00	24.42	163.39	6,286.52	-2,357.05	703.05	51.94	0.00	0.00	0.00	
6,900.00	24.42	163.39	6,377.57	-2,396.67	714.87	52.82	0.00	0.00	0.00	
7,000.00	24.42	163.39	6,468.62	-2,436.30	726.68	53.69	0.00	0.00	0.00	
7,100.00	24.42	163.39	6,559.67	-2,475.92	738.50	54.56	0.00	0.00	0.00	
7,200.00	24.42	163.39	6,650.72	-2,515.54	750.32	55.44	0.00	0.00	0.00	
7,300.00	24.42	163.39	6,741.77	-2,555.16	762.14	56.31	0.00	0.00	0.00	
7,400.00	24.42	163.39	6,832.83	-2,594.78	773.96	57.18	0.00	0.00	0.00	
7,500.00	24.42	163.39	6,923.88	-2,634.41	785.78	58.06	0.00	0.00	0.00	
7,600.00	24.42	163.39	7,014.93	-2,674.03	797.59	58.93	0.00	0.00	0.00	
7,700.00	24.42	163.39	7,105.98	-2,713.65	809.41	59.80	0.00	0.00	0.00	
7,800.00	24.42	163.39	7,197.03	-2,753.27	821.23	60.68	0.00	0.00	0.00	
7,900.00	24.42	163.39	7,288.09	-2,792.89	833.05	61.55	0.00	0.00	0.00	
7,982.08	24.42	163.39	7,362.82	-2,825.42	842.75	62.27	0.00	0.00	0.00	
Start DLS 10.00 TFO 105.13										
8,000.00	24.01	167.65	7,379.16	-2,832.53	844.59	62.69	10.00	-2.28	23.74	
8,050.00	23.52	180.01	7,424.95	-2,852.46	846.76	66.72	10.00	-0.98	24.73	
8,100.00	24.03	192.37	7,470.74	-2,872.39	844.58	74.90	10.00	1.00	24.72	
8,150.00	25.46	203.84	7,516.17	-2,892.18	838.05	87.17	10.00	2.87	22.93	
8,200.00	27.68	213.87	7,560.91	-2,911.67	827.23	103.43	10.00	4.45	20.06	
8,250.00	30.52	222.34	7,604.61	-2,930.71	812.19	123.57	10.00	5.68	16.96	
8,300.00	33.82	229.41	7,646.94	-2,949.16	793.06	147.43	10.00	6.60	14.14	
8,350.00	37.46	235.31	7,687.58	-2,966.88	769.98	174.83	10.00	7.27	11.80	
8,400.00	41.34	240.28	7,726.22	-2,983.73	743.12	205.56	10.00	7.77	9.94	
8,450.00	45.41	244.52	7,762.57	-2,999.58	712.69	239.39	10.00	8.13	8.48	
8,482.76	48.15	246.98	7,785.00	-3,009.38	690.92	263.10	10.00	8.36	7.52	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.30usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.30usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Niobrara									
8,500.00	49.61	248.20	7,796.34	-3,014.33	678.91	276.05	10.00	8.48	7.03
8,550.00	53.92	251.44	7,827.28	-3,027.84	642.06	315.27	10.00	8.61	6.48
8,600.00	58.30	254.34	7,855.16	-3,040.02	602.40	356.75	10.00	8.77	5.80
8,650.00	62.74	256.97	7,879.76	-3,050.78	560.24	400.18	10.00	8.89	5.27
8,700.00	67.23	259.40	7,900.90	-3,060.04	515.90	445.23	10.00	8.98	4.86
8,750.00	71.75	261.68	7,918.42	-3,067.72	469.72	491.54	10.00	9.05	4.55
8,800.00	76.30	263.84	7,932.18	-3,073.76	422.05	538.78	10.00	9.10	4.32
8,850.00	80.87	265.92	7,942.07	-3,078.12	373.25	586.57	10.00	9.13	4.16
8,900.00	85.45	267.95	7,948.03	-3,080.78	323.69	634.56	10.00	9.16	4.05
8,949.68	90.00	269.93	7,950.00	-3,081.69	274.08	682.08	10.00	9.17	4.00
Start 9898.05 hold at 8949.68 MD									
9,000.00	90.00	269.93	7,950.00	-3,081.75	223.76	730.00	0.00	0.00	0.00
9,100.00	90.00	269.93	7,950.00	-3,081.87	123.76	825.24	0.00	0.00	0.00
9,200.00	90.00	269.93	7,950.00	-3,081.99	23.76	920.48	0.00	0.00	0.00
9,300.00	90.00	269.93	7,950.00	-3,082.11	-76.24	1,015.72	0.00	0.00	0.00
9,400.00	90.00	269.93	7,950.00	-3,082.22	-176.24	1,110.96	0.00	0.00	0.00
9,500.00	90.00	269.93	7,950.00	-3,082.34	-276.24	1,206.20	0.00	0.00	0.00
9,600.00	90.00	269.93	7,950.00	-3,082.46	-376.24	1,301.44	0.00	0.00	0.00
9,700.00	90.00	269.93	7,950.00	-3,082.58	-476.24	1,396.68	0.00	0.00	0.00
9,800.00	90.00	269.93	7,950.00	-3,082.70	-576.24	1,491.92	0.00	0.00	0.00
9,900.00	90.00	269.93	7,950.00	-3,082.81	-676.24	1,587.16	0.00	0.00	0.00
10,000.00	90.00	269.93	7,950.00	-3,082.93	-776.24	1,682.39	0.00	0.00	0.00
10,100.00	90.00	269.93	7,950.00	-3,083.05	-876.24	1,777.63	0.00	0.00	0.00
10,200.00	90.00	269.93	7,950.00	-3,083.17	-976.24	1,872.87	0.00	0.00	0.00
10,300.00	90.00	269.93	7,950.00	-3,083.29	-1,076.24	1,968.11	0.00	0.00	0.00
10,400.00	90.00	269.93	7,950.00	-3,083.40	-1,176.24	2,063.35	0.00	0.00	0.00
10,500.00	90.00	269.93	7,950.00	-3,083.52	-1,276.24	2,158.59	0.00	0.00	0.00
10,600.00	90.00	269.93	7,950.00	-3,083.64	-1,376.24	2,253.83	0.00	0.00	0.00
10,700.00	90.00	269.93	7,950.00	-3,083.76	-1,476.24	2,349.07	0.00	0.00	0.00
10,800.00	90.00	269.93	7,950.00	-3,083.87	-1,576.24	2,444.31	0.00	0.00	0.00
10,900.00	90.00	269.93	7,950.00	-3,083.99	-1,676.24	2,539.55	0.00	0.00	0.00
11,000.00	90.00	269.93	7,950.00	-3,084.11	-1,776.24	2,634.79	0.00	0.00	0.00
11,100.00	90.00	269.93	7,950.00	-3,084.23	-1,876.24	2,730.02	0.00	0.00	0.00
11,200.00	90.00	269.93	7,950.00	-3,084.35	-1,976.24	2,825.26	0.00	0.00	0.00
11,300.00	90.00	269.93	7,950.00	-3,084.46	-2,076.24	2,920.50	0.00	0.00	0.00
11,400.00	90.00	269.93	7,950.00	-3,084.58	-2,176.24	3,015.74	0.00	0.00	0.00
11,500.00	90.00	269.93	7,950.00	-3,084.70	-2,276.24	3,110.98	0.00	0.00	0.00
11,600.00	90.00	269.93	7,950.00	-3,084.82	-2,376.24	3,206.22	0.00	0.00	0.00
11,700.00	90.00	269.93	7,950.00	-3,084.94	-2,476.24	3,301.46	0.00	0.00	0.00
11,800.00	90.00	269.93	7,950.00	-3,085.05	-2,576.24	3,396.70	0.00	0.00	0.00
11,900.00	90.00	269.93	7,950.00	-3,085.17	-2,676.24	3,491.94	0.00	0.00	0.00
12,000.00	90.00	269.93	7,950.00	-3,085.29	-2,776.24	3,587.18	0.00	0.00	0.00
12,100.00	90.00	269.93	7,950.00	-3,085.41	-2,876.24	3,682.41	0.00	0.00	0.00
12,200.00	90.00	269.93	7,950.00	-3,085.53	-2,976.24	3,777.65	0.00	0.00	0.00
12,300.00	90.00	269.93	7,950.00	-3,085.64	-3,076.24	3,872.89	0.00	0.00	0.00
12,400.00	90.00	269.93	7,950.00	-3,085.76	-3,176.24	3,968.13	0.00	0.00	0.00
12,500.00	90.00	269.93	7,950.00	-3,085.88	-3,276.24	4,063.37	0.00	0.00	0.00
12,600.00	90.00	269.93	7,950.00	-3,086.00	-3,376.24	4,158.61	0.00	0.00	0.00
12,700.00	90.00	269.93	7,950.00	-3,086.11	-3,476.24	4,253.85	0.00	0.00	0.00
12,800.00	90.00	269.93	7,950.00	-3,086.23	-3,576.24	4,349.09	0.00	0.00	0.00
12,900.00	90.00	269.93	7,950.00	-3,086.35	-3,676.24	4,444.33	0.00	0.00	0.00
13,000.00	90.00	269.93	7,950.00	-3,086.47	-3,776.24	4,539.57	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.30usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.30usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
13,100.00	90.00	269.93	7,950.00	-3,086.59	-3,876.24	4,634.80	0.00	0.00	0.00	
13,200.00	90.00	269.93	7,950.00	-3,086.70	-3,976.24	4,730.04	0.00	0.00	0.00	
13,300.00	90.00	269.93	7,950.00	-3,086.82	-4,076.24	4,825.28	0.00	0.00	0.00	
13,400.00	90.00	269.93	7,950.00	-3,086.94	-4,176.24	4,920.52	0.00	0.00	0.00	
13,500.00	90.00	269.93	7,950.00	-3,087.06	-4,276.24	5,015.76	0.00	0.00	0.00	
13,600.00	90.00	269.93	7,950.00	-3,087.18	-4,376.24	5,111.00	0.00	0.00	0.00	
13,700.00	90.00	269.93	7,950.00	-3,087.29	-4,476.24	5,206.24	0.00	0.00	0.00	
13,800.00	90.00	269.93	7,950.00	-3,087.41	-4,576.24	5,301.48	0.00	0.00	0.00	
13,900.00	90.00	269.93	7,950.00	-3,087.53	-4,676.24	5,396.72	0.00	0.00	0.00	
14,000.00	90.00	269.93	7,950.00	-3,087.65	-4,776.24	5,491.96	0.00	0.00	0.00	
14,100.00	90.00	269.93	7,950.00	-3,087.76	-4,876.24	5,587.20	0.00	0.00	0.00	
14,200.00	90.00	269.93	7,950.00	-3,087.88	-4,976.24	5,682.43	0.00	0.00	0.00	
14,300.00	90.00	269.93	7,950.00	-3,088.00	-5,076.24	5,777.67	0.00	0.00	0.00	
14,400.00	90.00	269.93	7,950.00	-3,088.12	-5,176.24	5,872.91	0.00	0.00	0.00	
14,500.00	90.00	269.93	7,950.00	-3,088.24	-5,276.24	5,968.15	0.00	0.00	0.00	
14,600.00	90.00	269.93	7,950.00	-3,088.35	-5,376.24	6,063.39	0.00	0.00	0.00	
14,700.00	90.00	269.93	7,950.00	-3,088.47	-5,476.24	6,158.63	0.00	0.00	0.00	
14,800.00	90.00	269.93	7,950.00	-3,088.59	-5,576.24	6,253.87	0.00	0.00	0.00	
14,900.00	90.00	269.93	7,950.00	-3,088.71	-5,676.24	6,349.11	0.00	0.00	0.00	
15,000.00	90.00	269.93	7,950.00	-3,088.83	-5,776.24	6,444.35	0.00	0.00	0.00	
15,100.00	90.00	269.93	7,950.00	-3,088.94	-5,876.24	6,539.59	0.00	0.00	0.00	
15,200.00	90.00	269.93	7,950.00	-3,089.06	-5,976.24	6,634.82	0.00	0.00	0.00	
15,300.00	90.00	269.93	7,950.00	-3,089.18	-6,076.24	6,730.06	0.00	0.00	0.00	
15,400.00	90.00	269.93	7,950.00	-3,089.30	-6,176.24	6,825.30	0.00	0.00	0.00	
15,500.00	90.00	269.93	7,950.00	-3,089.42	-6,276.24	6,920.54	0.00	0.00	0.00	
15,600.00	90.00	269.93	7,950.00	-3,089.53	-6,376.24	7,015.78	0.00	0.00	0.00	
15,700.00	90.00	269.93	7,950.00	-3,089.65	-6,476.24	7,111.02	0.00	0.00	0.00	
15,800.00	90.00	269.93	7,950.00	-3,089.77	-6,576.24	7,206.26	0.00	0.00	0.00	
15,900.00	90.00	269.93	7,950.00	-3,089.89	-6,676.24	7,301.50	0.00	0.00	0.00	
16,000.00	90.00	269.93	7,950.00	-3,090.00	-6,776.24	7,396.74	0.00	0.00	0.00	
16,100.00	90.00	269.93	7,950.00	-3,090.12	-6,876.24	7,491.98	0.00	0.00	0.00	
16,200.00	90.00	269.93	7,950.00	-3,090.24	-6,976.24	7,587.21	0.00	0.00	0.00	
16,300.00	90.00	269.93	7,950.00	-3,090.36	-7,076.24	7,682.45	0.00	0.00	0.00	
16,400.00	90.00	269.93	7,950.00	-3,090.48	-7,176.24	7,777.69	0.00	0.00	0.00	
16,500.00	90.00	269.93	7,950.00	-3,090.59	-7,276.24	7,872.93	0.00	0.00	0.00	
16,600.00	90.00	269.93	7,950.00	-3,090.71	-7,376.24	7,968.17	0.00	0.00	0.00	
16,700.00	90.00	269.93	7,950.00	-3,090.83	-7,476.24	8,063.41	0.00	0.00	0.00	
16,800.00	90.00	269.93	7,950.00	-3,090.95	-7,576.24	8,158.65	0.00	0.00	0.00	
16,900.00	90.00	269.93	7,950.00	-3,091.07	-7,676.24	8,253.89	0.00	0.00	0.00	
17,000.00	90.00	269.93	7,950.00	-3,091.18	-7,776.24	8,349.13	0.00	0.00	0.00	
17,100.00	90.00	269.93	7,950.00	-3,091.30	-7,876.24	8,444.37	0.00	0.00	0.00	
17,200.00	90.00	269.93	7,950.00	-3,091.42	-7,976.24	8,539.60	0.00	0.00	0.00	
17,300.00	90.00	269.93	7,950.00	-3,091.54	-8,076.24	8,634.84	0.00	0.00	0.00	
17,400.00	90.00	269.93	7,950.00	-3,091.65	-8,176.24	8,730.08	0.00	0.00	0.00	
17,500.00	90.00	269.93	7,950.00	-3,091.77	-8,276.24	8,825.32	0.00	0.00	0.00	
17,600.00	90.00	269.93	7,950.00	-3,091.89	-8,376.24	8,920.56	0.00	0.00	0.00	
17,700.00	90.00	269.93	7,950.00	-3,092.01	-8,476.24	9,015.80	0.00	0.00	0.00	
17,800.00	90.00	269.93	7,950.00	-3,092.13	-8,576.24	9,111.04	0.00	0.00	0.00	
17,900.00	90.00	269.93	7,950.00	-3,092.24	-8,676.24	9,206.28	0.00	0.00	0.00	
18,000.00	90.00	269.93	7,950.00	-3,092.36	-8,776.24	9,301.52	0.00	0.00	0.00	
18,100.00	90.00	269.93	7,950.00	-3,092.48	-8,876.24	9,396.76	0.00	0.00	0.00	
18,200.00	90.00	269.93	7,950.00	-3,092.60	-8,976.24	9,492.00	0.00	0.00	0.00	
18,300.00	90.00	269.93	7,950.00	-3,092.72	-9,076.24	9,587.23	0.00	0.00	0.00	
18,400.00	90.00	269.93	7,950.00	-3,092.83	-9,176.24	9,682.47	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.30usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.30usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
18,500.00	90.00	269.93	7,950.00	-3,092.95	-9,276.24	9,777.71	0.00	0.00	0.00	
18,600.00	90.00	269.93	7,950.00	-3,093.07	-9,376.24	9,872.95	0.00	0.00	0.00	
18,700.00	90.00	269.93	7,950.00	-3,093.19	-9,476.24	9,968.19	0.00	0.00	0.00	
18,800.00	90.00	269.93	7,950.00	-3,093.31	-9,576.24	10,063.43	0.00	0.00	0.00	
18,847.73	90.00	269.93	7,950.00	-3,093.36	-9,623.97	10,108.89	0.00	0.00	0.00	
TD at 18847.73										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
LP-LT 4-65 4BH - hit/miss target - Shape - Point	0.00	0.00	7,950.00	-3,081.69	274.08	1,680,151.16	3,241,414.26	39.697686°N	104.642058°W	
PBHL-LT 4-65 4BH - plan hits target center - Point	0.00	0.00	7,950.00	-3,093.36	-9,623.97	1,680,046.12	3,231,516.85	39.697649°N	104.677233°W	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,470.60	1,434.00	Laramie				
1,841.81	1,772.00	Fox Hills				
2,449.16	2,325.00	Upper Pierre aquifer				
3,204.77	3,013.00	Base of Upper Pierre aquifer				
6,173.42	5,716.00	Terry ("Sussex")				
6,173.42	5,716.00	Hygiene ("Shannon")				
6,173.42	5,716.00	Mitten				
6,173.42	5,716.00	Mitten Marker 1				
6,173.42	5,716.00	Tepee Buttes				
6,173.42	5,716.00	Mitten Marker 2				
6,173.42	5,716.00	Sharon Springs				
8,482.76	7,785.00	Niobrara				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
250.00	250.00	0.00	0.00	Start Build 2.00	
1,471.15	1,434.50	-245.65	73.27	Start 6510.93 hold at 1471.15 MD	
7,982.08	7,362.82	-2,825.42	842.75	Start DLS 10.00 TFO 105.13	
8,949.68	7,950.00	-3,081.69	274.08	Start 9898.05 hold at 8949.68 MD	
18,847.73	7,950.00	-3,093.36	-9,623.97	TD at 18847.73	

CRESTONE PEAK RESOURCES

**ARAPAHOE COUNTY
SEC 15-T4S-R65W
LONE TREE 4-65 15-16 4BH**

**OWB
PROPOSAL 1**

Anticollision Report

11 February, 2022

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	2/11/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	18,847.73	PROPOSAL 1 (OWB)	MWD OWSG	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SEC 15-T4S-R65W						
ABND VERT BUCKLEY-STATE 16-16 - OWB - Design #	14,522.03	7,921.70	275.94	-23.21	0.922	Level 1, CC, ES, SF
ABND VERT STATE-SMITH 1-16 - OWB - Design #1	18,509.27	7,868.70	4,160.86	3,756.97	10.302	CC
ABND VERT STATE-SMITH 1-16 - OWB - Design #1	18,600.00	7,868.70	4,161.85	3,756.02	10.255	ES
ABND VERT STATE-SMITH 1-16 - OWB - Design #1	18,847.73	7,868.70	4,174.60	3,764.11	10.170	SF
EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL	759.30	756.28	16.69	11.63	3.300	CC, ES, SF
EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FI	2,331.61	2,218.00	811.68	798.36	60.954	CC, ES
EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FI	3,800.00	3,515.07	1,063.71	1,037.80	41.055	SF
LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	206.19	211.89	300.15	299.10	285.696	CC
LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	250.00	255.27	300.16	298.79	220.199	ES
LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	18,847.73	18,221.72	4,459.37	3,907.64	8.083	SF
LONE TREE 4-65 15-16 1BH - OWB - PROPOSAL 1	250.00	254.90	250.25	248.89	183.761	CC, ES
LONE TREE 4-65 15-16 1BH - OWB - PROPOSAL 1	18,847.73	18,230.53	3,788.75	3,236.89	6.865	SF
LONE TREE 4-65 15-16 2AH - OWB - PROPOSAL 1	250.69	255.23	199.98	198.62	146.517	CC, ES
LONE TREE 4-65 15-16 2AH - OWB - PROPOSAL 1	18,847.73	18,142.12	3,119.87	2,568.36	5.657	SF
LONE TREE 4-65 15-16 2BH - OWB - PROPOSAL 1	250.21	250.32	150.08	148.73	111.493	CC
LONE TREE 4-65 15-16 2BH - OWB - PROPOSAL 1	300.00	301.80	150.21	148.52	88.649	ES
LONE TREE 4-65 15-16 2BH - OWB - PROPOSAL 1	18,847.73	18,253.56	2,448.97	1,897.05	4.437	SF
LONE TREE 4-65 15-16 3CH - OWB - PROPOSAL 1	254.46	254.71	100.17	98.80	72.812	CC
LONE TREE 4-65 15-16 3CH - OWB - PROPOSAL 1	900.00	921.04	102.30	96.20	16.764	ES
LONE TREE 4-65 15-16 3CH - OWB - PROPOSAL 1	18,847.73	18,484.96	1,199.89	647.25	2.171	SF
LONE TREE 4-65 15-16 4AH - OWB - PROPOSAL 1	250.00	250.00	50.27	48.93	37.396	CC
LONE TREE 4-65 15-16 4AH - OWB - PROPOSAL 1	1,300.00	1,316.68	52.19	42.64	5.469	ES
LONE TREE 4-65 15-16 4AH - OWB - PROPOSAL 1	18,847.73	18,577.67	604.61	57.19	1.104	Level 2, SF
PROSPER FARMS 4-65 14-13 1AH - OWB - PROPOSA	206.36	211.66	275.02	273.97	261.833	CC
PROSPER FARMS 4-65 14-13 1AH - OWB - PROPOSA	250.00	254.86	275.03	273.67	201.970	ES
PROSPER FARMS 4-65 14-13 1AH - OWB - PROPOSA	12,100.00	7,209.69	5,513.04	5,408.23	52.601	SF
PROSPER FARMS 4-65 14-13 1BH - OWB - PROPOSA	250.00	254.40	225.12	223.76	165.523	CC, ES
PROSPER FARMS 4-65 14-13 1BH - OWB - PROPOSA	11,200.00	7,470.63	4,409.79	4,317.25	47.651	SF
PROSPER FARMS 4-65 14-13 2BH - OWB - PROPOSA	605.69	626.60	174.90	171.01	44.972	CC, ES
PROSPER FARMS 4-65 14-13 2BH - OWB - PROPOSA	1,300.00	1,314.32	254.71	245.58	27.895	SF
PROSPER FARMS 4-65 14-13 3AH - OWB - PROPOSA	838.50	863.12	122.38	116.80	21.912	CC, ES
PROSPER FARMS 4-65 14-13 3AH - OWB - PROPOSA	1,200.00	1,223.61	144.54	136.18	17.294	SF
PROSPER FARMS 4-65 14-13 3BH - OWB - PROPOSA	1,034.26	1,053.96	70.61	63.63	10.111	CC, ES
PROSPER FARMS 4-65 14-13 3BH - OWB - PROPOSA	1,200.00	1,219.53	75.52	67.25	9.134	SF
PROSPER FARMS 4-65 14-13 4AH - OWB - PROPOSA	792.88	797.51	24.12	18.96	4.677	CC
PROSPER FARMS 4-65 14-13 4AH - OWB - PROPOSA	1,000.00	1,006.24	24.95	18.19	3.692	ES
PROSPER FARMS 4-65 14-13 4AH - OWB - PROPOSA	1,300.00	1,307.78	31.41	21.53	3.178	SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SEC 15-T4S-R65W						
PROSPER FARMS 4-65 14-13 4BH - OWB - PROPOSA	8,597.93	8,546.11	0.57	-72.34	0.008	Level 1, CC, SF
PROSPER FARMS 4-65 14-13 4BH - OWB - PROPOSA	8,600.00	8,545.42	2.17	-74.87	0.028	Level 1, ES

Offset Design													Offset Site Error:	0.00 usft
SEC 15-T4S-R65W - ABND VERT BUCKLEY-STATE 16-16 - OWB - Design #1													Offset Well Error:	0.00 usft
Survey Program: 0-INC-ONLY														
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-117.96	-2,812.33	-5,298.60	5,998.76					
100.00	100.00	71.70	71.70	0.13	0.56	-117.96	-2,812.33	-5,298.60	5,998.69	5,997.99	0.70	8,599.558		
200.00	200.00	171.70	171.70	0.49	2.04	-117.96	-2,812.33	-5,298.60	5,998.69	5,996.16	2.53	2,371.307		
250.00	250.00	221.70	221.70	0.67	2.91	-117.96	-2,812.33	-5,298.60	5,998.69	5,995.11	3.58	1,674.864		
300.00	300.00	271.70	271.70	0.84	3.78	78.66	-2,812.33	-5,298.60	5,998.61	5,993.98	4.63	1,296.928		
400.00	399.93	371.63	371.63	1.19	5.53	78.70	-2,812.33	-5,298.60	5,997.92	5,991.21	6.71	894.021		
500.00	499.68	471.38	471.38	1.54	7.27	78.79	-2,812.33	-5,298.60	5,996.56	5,987.75	8.81	680.902		
600.00	599.13	570.83	570.83	1.92	9.00	78.93	-2,812.33	-5,298.60	5,994.53	5,983.61	10.92	549.057		
700.00	698.15	669.85	669.85	2.32	10.73	79.11	-2,812.33	-5,298.60	5,991.85	5,978.81	13.04	459.347		
800.00	796.63	768.33	768.33	2.74	12.45	79.34	-2,812.33	-5,298.60	5,988.56	5,973.37	15.19	394.273		
900.00	894.44	866.14	866.14	3.20	14.16	79.61	-2,812.33	-5,298.60	5,984.68	5,967.32	17.35	344.852		
1,000.00	991.46	963.16	963.16	3.70	15.85	79.92	-2,812.33	-5,298.60	5,980.25	5,960.70	19.54	306.006		
1,100.00	1,087.58	1,059.28	1,059.28	4.24	17.53	80.26	-2,812.33	-5,298.60	5,975.32	5,953.56	21.76	274.647		
1,200.00	1,182.68	1,154.38	1,154.38	4.83	19.19	80.65	-2,812.33	-5,298.60	5,969.94	5,945.94	24.00	248.788		
1,300.00	1,276.65	1,248.35	1,248.35	5.46	20.83	81.07	-2,812.33	-5,298.60	5,964.16	5,937.90	26.26	227.097		
1,400.00	1,369.36	1,341.06	1,341.06	6.14	22.45	81.52	-2,812.33	-5,298.60	5,958.06	5,929.50	28.56	208.643		
1,471.15	1,434.50	1,406.20	1,406.20	6.66	23.58	81.86	-2,812.33	-5,298.60	5,953.55	5,923.35	30.20	197.113		
1,500.00	1,460.77	1,432.47	1,432.47	6.87	24.04	81.96	-2,812.33	-5,298.60	5,951.71	5,920.84	30.87	192.770		
1,600.00	1,551.82	1,523.52	1,523.52	7.62	25.63	82.32	-2,812.33	-5,298.60	5,945.51	5,912.30	33.21	179.017		
1,700.00	1,642.88	1,614.58	1,614.58	8.38	27.22	82.68	-2,812.33	-5,298.60	5,939.60	5,904.04	35.56	167.029		
1,800.00	1,733.93	1,705.63	1,705.63	9.15	28.81	83.04	-2,812.33	-5,298.60	5,933.97	5,896.05	37.92	156.498		
1,900.00	1,824.98	1,803.32	1,796.68	9.93	30.51	83.40	-2,812.33	-5,298.60	5,928.62	5,888.22	40.40	146.760		
2,000.00	1,916.03	1,887.73	1,887.73	10.71	31.99	83.77	-2,812.33	-5,298.60	5,923.55	5,880.90	42.65	138.888		
2,100.00	2,007.08	1,978.78	1,978.78	11.49	33.58	84.13	-2,812.33	-5,298.60	5,918.77	5,873.74	45.02	131.461		
2,200.00	2,098.13	2,069.83	2,069.83	12.28	35.17	84.49	-2,812.33	-5,298.60	5,914.27	5,866.87	47.40	124.774		
2,300.00	2,189.19	2,160.89	2,160.89	13.07	36.75	84.86	-2,812.33	-5,298.60	5,910.06	5,860.28	49.78	118.724		
2,400.00	2,280.24	2,251.94	2,251.94	13.86	38.34	85.22	-2,812.33	-5,298.60	5,906.14	5,853.97	52.16	113.226		
2,500.00	2,371.29	2,342.99	2,342.99	14.65	39.93	85.58	-2,812.33	-5,298.60	5,902.50	5,847.95	54.55	108.210		
2,600.00	2,462.34	2,434.04	2,434.04	15.44	41.52	85.95	-2,812.33	-5,298.60	5,899.15	5,842.22	56.93	103.616		
2,700.00	2,553.39	2,525.09	2,525.09	16.24	43.11	86.31	-2,812.33	-5,298.60	5,896.09	5,836.77	59.32	99.394		
2,800.00	2,644.45	2,616.15	2,616.15	17.03	44.70	86.68	-2,812.33	-5,298.60	5,893.31	5,831.60	61.71	95.502		
2,900.00	2,735.50	2,707.20	2,707.20	17.83	46.29	87.05	-2,812.33	-5,298.60	5,890.83	5,826.73	64.10	91.902		
3,000.00	2,826.55	2,801.75	2,798.25	18.63	47.94	87.41	-2,812.33	-5,298.60	5,888.63	5,822.08	66.55	88.484		
3,100.00	2,917.60	2,889.30	2,889.30	19.43	49.47	87.78	-2,812.33	-5,298.60	5,886.73	5,817.85	68.88	85.463		
3,200.00	3,008.65	2,980.35	2,980.35	20.23	51.06	88.14	-2,812.33	-5,298.60	5,885.11	5,813.84	71.27	82.573		
3,300.00	3,099.70	3,071.40	3,071.40	21.03	52.65	88.51	-2,812.33	-5,298.60	5,883.79	5,810.12	73.66	79.874		
3,400.00	3,190.76	3,162.46	3,162.46	21.83	54.24	88.88	-2,812.33	-5,298.60	5,882.75	5,806.70	76.06	77.348		
3,500.00	3,281.81	3,253.51	3,253.51	22.63	55.82	89.24	-2,812.33	-5,298.60	5,882.01	5,803.56	78.45	74.980		
3,600.00	3,372.86	3,344.56	3,344.56	23.43	57.41	89.61	-2,812.33	-5,298.60	5,881.55	5,800.71	80.84	72.756		
3,700.00	3,463.91	3,435.61	3,435.61	24.23	59.00	89.98	-2,812.33	-5,298.60	5,881.39	5,798.16	83.23	70.664		
3,706.25	3,469.60	3,441.30	3,441.30	24.28	59.10	90.00	-2,812.33	-5,298.60	5,881.39	5,798.01	83.38	70.537		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
3,800.00	3,554.96	3,526.66	3,526.66	25.03	60.59	90.34	-2,812.33	-5,298.60	5,881.52	5,795.89	85.62	68.692		
3,900.00	3,646.01	3,617.71	3,617.71	25.83	62.18	90.71	-2,812.33	-5,298.60	5,881.93	5,793.92	88.01	66.831		
4,000.00	3,737.07	3,708.77	3,708.77	26.63	63.77	91.08	-2,812.33	-5,298.60	5,882.64	5,792.24	90.40	65.072		
4,100.00	3,828.12	3,800.18	3,799.82	27.43	65.37	91.44	-2,812.33	-5,298.60	5,883.64	5,790.84	92.80	63.403		
4,200.00	3,919.17	3,909.13	3,909.87	28.24	67.27	91.81	-2,812.33	-5,298.60	5,884.93	5,789.43	95.50	61.624		
4,300.00	4,010.22	3,981.92	3,981.92	29.04	68.54	92.18	-2,812.33	-5,298.60	5,886.51	5,788.94	97.57	60.334		
4,400.00	4,101.27	4,072.97	4,072.97	29.84	70.13	92.54	-2,812.33	-5,298.60	5,888.38	5,788.43	99.95	58.912		
4,500.00	4,192.33	4,164.03	4,164.03	30.65	71.72	92.91	-2,812.33	-5,298.60	5,890.54	5,788.20	102.34	57.560		
4,600.00	4,283.38	4,255.08	4,255.08	31.45	73.31	93.27	-2,812.33	-5,298.60	5,892.99	5,788.27	104.72	56.273		
4,700.00	4,374.43	4,346.13	4,346.13	32.25	74.89	93.64	-2,812.33	-5,298.60	5,895.72	5,788.62	107.10	55.045		
4,800.00	4,465.48	4,437.18	4,437.18	33.05	76.48	94.00	-2,812.33	-5,298.60	5,898.75	5,789.26	109.48	53.878		
4,900.00	4,556.53	4,528.23	4,528.23	33.86	78.07	94.37	-2,812.33	-5,298.60	5,902.06	5,790.20	111.86	52.761		
5,000.00	4,647.58	4,619.28	4,619.28	34.66	79.66	94.73	-2,812.33	-5,298.60	5,905.66	5,791.42	114.24	51.694		
5,100.00	4,738.64	4,710.34	4,710.34	35.47	81.25	95.10	-2,812.33	-5,298.60	5,909.55	5,792.94	116.62	50.674		
5,200.00	4,829.69	4,801.39	4,801.39	36.27	82.84	95.46	-2,812.33	-5,298.60	5,913.73	5,794.74	118.99	49.698		
5,300.00	4,920.74	4,907.56	4,892.44	37.07	84.69	95.82	-2,812.33	-5,298.60	5,918.19	5,796.56	121.63	48.658		
5,400.00	5,011.79	4,983.49	4,983.49	37.88	86.02	96.19	-2,812.33	-5,298.60	5,922.94	5,799.20	123.74	47.867		
5,500.00	5,102.84	5,074.54	5,074.54	38.68	87.61	96.55	-2,812.33	-5,298.60	5,927.97	5,801.86	126.10	47.008		
5,600.00	5,193.89	5,165.59	5,165.59	39.48	89.20	96.91	-2,812.33	-5,298.60	5,933.28	5,804.81	128.47	46.184		
5,700.00	5,284.95	5,256.65	5,256.65	40.29	90.79	97.27	-2,812.33	-5,298.60	5,938.88	5,808.04	130.84	45.392		
5,800.00	5,376.00	5,347.70	5,347.70	41.09	92.38	97.63	-2,812.33	-5,298.60	5,944.76	5,811.56	133.20	44.631		
5,900.00	5,467.05	5,438.75	5,438.75	41.90	93.96	97.99	-2,812.33	-5,298.60	5,950.92	5,815.36	135.56	43.899		
6,000.00	5,558.10	5,529.80	5,529.80	42.70	95.55	98.35	-2,812.33	-5,298.60	5,957.36	5,819.45	137.92	43.196		
6,100.00	5,649.15	5,620.85	5,620.85	43.51	97.14	98.71	-2,812.33	-5,298.60	5,964.09	5,823.81	140.27	42.518		
6,200.00	5,740.21	5,711.91	5,711.91	44.31	98.73	99.07	-2,812.33	-5,298.60	5,971.09	5,828.46	142.62	41.866		
6,300.00	5,831.26	5,802.96	5,802.96	45.11	100.32	99.43	-2,812.33	-5,298.60	5,978.37	5,833.39	144.97	41.237		
6,400.00	5,922.31	5,905.99	5,894.01	45.92	102.12	99.78	-2,812.33	-5,298.60	5,985.92	5,838.39	147.53	40.574		
6,500.00	6,013.36	5,985.06	5,985.06	46.72	103.50	100.14	-2,812.33	-5,298.60	5,993.75	5,844.08	149.67	40.047		
6,600.00	6,104.41	6,076.11	6,076.11	47.53	105.09	100.49	-2,812.33	-5,298.60	6,001.86	5,849.85	152.01	39.483		
6,700.00	6,195.46	6,167.16	6,167.16	48.33	106.68	100.85	-2,812.33	-5,298.60	6,010.24	5,855.89	154.35	38.939		
6,800.00	6,286.52	6,258.22	6,258.22	49.14	108.27	101.20	-2,812.33	-5,298.60	6,018.89	5,862.20	156.69	38.414		
6,900.00	6,377.57	6,349.27	6,349.27	49.94	109.86	101.55	-2,812.33	-5,298.60	6,027.81	5,868.79	159.02	37.906		
7,000.00	6,468.62	6,440.32	6,440.32	50.75	111.44	101.91	-2,812.33	-5,298.60	6,037.00	5,875.65	161.35	37.416		
7,100.00	6,559.67	6,531.37	6,531.37	51.55	113.03	102.26	-2,812.33	-5,298.60	6,046.47	5,882.79	163.68	36.941		
7,200.00	6,650.72	6,622.42	6,622.42	52.36	114.62	102.61	-2,812.33	-5,298.60	6,056.19	5,890.19	166.00	36.482		
7,300.00	6,741.77	6,713.47	6,713.47	53.16	116.21	102.95	-2,812.33	-5,298.60	6,066.19	5,897.86	168.33	36.039		
7,400.00	6,832.83	6,804.53	6,804.53	53.97	117.80	103.30	-2,812.33	-5,298.60	6,076.45	5,905.81	170.64	35.609		
7,500.00	6,923.88	6,904.42	6,895.58	54.77	119.54	103.65	-2,812.33	-5,298.60	6,086.97	5,913.86	173.11	35.162		
7,600.00	7,014.93	6,986.63	6,986.63	55.58	120.98	104.00	-2,812.33	-5,298.60	6,097.76	5,922.49	175.27	34.790		
7,700.00	7,105.98	7,077.68	7,077.68	56.38	122.57	104.34	-2,812.33	-5,298.60	6,108.81	5,931.22	177.58	34.400		
7,800.00	7,197.03	7,168.73	7,168.73	57.19	124.16	104.68	-2,812.33	-5,298.60	6,120.11	5,940.22	179.89	34.022		
7,900.00	7,288.09	7,259.79	7,259.79	57.99	125.75	105.03	-2,812.33	-5,298.60	6,131.68	5,949.49	182.19	33.655		
7,982.08	7,362.82	7,334.52	7,334.52	58.65	127.05	105.31	-2,812.33	-5,298.60	6,141.36	5,957.28	184.08	33.363		
8,000.00	7,379.16	7,350.86	7,350.86	58.79	127.34	101.49	-2,812.33	-5,298.60	6,143.22	5,958.73	184.49	33.298		
8,050.00	7,424.95	7,403.35	7,396.65	59.18	128.25	90.33	-2,812.33	-5,298.60	6,145.49	5,959.74	185.75	33.084		
8,100.00	7,470.74	7,442.44	7,442.44	59.53	128.94	79.19	-2,812.33	-5,298.60	6,143.47	5,956.71	186.76	32.894		
8,150.00	7,516.17	7,487.87	7,487.87	59.84	129.73	68.95	-2,812.33	-5,298.60	6,137.17	5,949.30	187.87	32.667		
8,200.00	7,560.91	7,532.61	7,532.61	60.13	130.51	60.16	-2,812.33	-5,298.60	6,126.63	5,937.69	188.94	32.427		
8,250.00	7,604.61	7,576.31	7,576.31	60.38	131.27	52.95	-2,812.33	-5,298.60	6,111.94	5,921.97	189.97	32.174		
8,300.00	7,646.94	7,618.64	7,618.64	60.60	132.01	47.18	-2,812.33	-5,298.60	6,093.20	5,902.25	190.95	31.910		
8,350.00	7,687.58	7,659.28	7,659.28	60.78	132.72	42.62	-2,812.33	-5,298.60	6,070.54	5,878.67	191.87	31.638		
8,400.00	7,726.22	7,702.08	7,697.92	60.94	133.47	39.05	-2,812.33	-5,298.60	6,044.15	5,851.33	192.82	31.346		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
8,450.00	7,762.57	7,734.27	7,734.27	61.07	134.03	36.28	-2,812.33	-5,298.60	6,014.20	5,820.64	193.56	31.072		
8,500.00	7,796.34	7,768.04	7,768.04	61.18	134.62	34.17	-2,812.33	-5,298.60	5,980.92	5,786.62	194.31	30.781		
8,550.00	7,827.28	7,801.02	7,798.98	61.26	135.19	32.60	-2,812.33	-5,298.60	5,944.56	5,749.54	195.02	30.481		
8,600.00	7,855.16	7,826.86	7,826.86	61.31	135.64	31.54	-2,812.33	-5,298.60	5,905.39	5,709.79	195.60	30.192		
8,650.00	7,879.76	7,851.46	7,851.46	61.35	136.07	30.95	-2,812.33	-5,298.60	5,863.69	5,667.56	196.13	29.896		
8,700.00	7,900.90	7,872.60	7,872.60	61.37	136.44	30.89	-2,812.33	-5,298.60	5,819.78	5,623.18	196.60	29.603		
8,750.00	7,918.42	7,909.88	7,890.12	61.37	137.09	31.48	-2,812.33	-5,298.60	5,773.97	5,576.64	197.33	29.261		
8,800.00	7,932.18	7,903.88	7,903.88	61.35	136.99	33.10	-2,812.33	-5,298.60	5,726.62	5,529.33	197.29	29.027		
8,850.00	7,942.07	7,913.77	7,913.77	61.31	137.16	36.77	-2,812.33	-5,298.60	5,678.07	5,480.56	197.51	28.748		
8,900.00	7,948.03	7,919.73	7,919.73	61.26	137.27	46.53	-2,812.33	-5,298.60	5,628.70	5,431.04	197.65	28.477		
8,949.68	7,950.00	7,921.70	7,921.70	61.20	137.30	90.00	-2,812.33	-5,298.60	5,579.18	5,381.47	197.72	28.218		
9,000.00	7,950.00	7,921.70	7,921.70	61.14	137.30	90.00	-2,812.33	-5,298.60	5,528.92	5,331.19	197.74	27.961		
9,100.00	7,950.00	7,921.70	7,921.70	61.03	137.30	90.00	-2,812.33	-5,298.60	5,429.05	5,231.27	197.78	27.450		
9,200.00	7,950.00	7,921.70	7,921.70	60.93	137.30	90.00	-2,812.33	-5,298.60	5,329.18	5,131.36	197.82	26.939		
9,300.00	7,950.00	7,921.70	7,921.70	60.85	137.30	90.00	-2,812.33	-5,298.60	5,229.32	5,031.45	197.87	26.428		
9,400.00	7,950.00	7,921.70	7,921.70	60.80	137.30	90.00	-2,812.33	-5,298.60	5,129.46	4,931.54	197.92	25.917		
9,500.00	7,950.00	7,921.70	7,921.70	60.77	137.30	90.00	-2,812.33	-5,298.60	5,029.61	4,831.63	197.97	25.405		
9,600.00	7,950.00	7,921.70	7,921.70	60.76	137.30	90.00	-2,812.33	-5,298.60	4,929.76	4,731.73	198.03	24.894		
9,700.00	7,950.00	7,921.70	7,921.70	60.79	137.30	90.00	-2,812.33	-5,298.60	4,829.92	4,631.83	198.09	24.383		
9,800.00	7,950.00	7,921.70	7,921.70	60.86	137.30	90.00	-2,812.33	-5,298.60	4,730.09	4,531.94	198.15	23.871		
9,900.00	7,950.00	7,921.70	7,921.70	60.99	137.30	90.00	-2,812.33	-5,298.60	4,630.26	4,432.05	198.22	23.360		
10,000.00	7,950.00	7,921.70	7,921.70	61.21	137.30	90.00	-2,812.33	-5,298.60	4,530.44	4,332.16	198.28	22.848		
10,100.00	7,950.00	7,921.70	7,921.70	61.56	137.30	90.00	-2,812.33	-5,298.60	4,430.63	4,232.28	198.36	22.337		
10,200.00	7,950.00	7,921.70	7,921.70	62.08	137.30	90.00	-2,812.33	-5,298.60	4,330.83	4,132.40	198.44	21.825		
10,300.00	7,950.00	7,921.70	7,921.70	62.87	137.30	90.00	-2,812.33	-5,298.60	4,231.04	4,032.52	198.52	21.313		
10,400.00	7,950.00	7,921.70	7,921.70	63.95	137.30	90.00	-2,812.33	-5,298.60	4,131.26	3,932.65	198.60	20.801		
10,500.00	7,950.00	7,921.70	7,921.70	65.35	137.30	90.00	-2,812.33	-5,298.60	4,031.49	3,832.79	198.70	20.290		
10,600.00	7,950.00	7,921.70	7,921.70	67.00	137.30	90.00	-2,812.33	-5,298.60	3,931.73	3,732.93	198.79	19.778		
10,700.00	7,950.00	7,921.70	7,921.70	68.85	137.30	90.00	-2,812.33	-5,298.60	3,831.98	3,633.08	198.90	19.266		
10,800.00	7,950.00	7,921.70	7,921.70	70.83	137.30	90.00	-2,812.33	-5,298.60	3,732.25	3,533.24	199.01	18.754		
10,900.00	7,950.00	7,921.70	7,921.70	72.91	137.30	90.00	-2,812.33	-5,298.60	3,632.53	3,433.40	199.13	18.242		
11,000.00	7,950.00	7,921.70	7,921.70	75.07	137.30	90.00	-2,812.33	-5,298.60	3,532.83	3,333.57	199.25	17.730		
11,100.00	7,950.00	7,921.70	7,921.70	77.28	137.30	90.00	-2,812.33	-5,298.60	3,433.14	3,233.75	199.39	17.218		
11,200.00	7,950.00	7,921.70	7,921.70	79.54	137.30	90.00	-2,812.33	-5,298.60	3,333.47	3,133.94	199.53	16.706		
11,300.00	7,950.00	7,921.70	7,921.70	81.83	137.30	90.00	-2,812.33	-5,298.60	3,233.83	3,034.14	199.69	16.194		
11,400.00	7,950.00	7,921.70	7,921.70	84.16	137.30	90.00	-2,812.33	-5,298.60	3,134.20	2,934.35	199.86	15.682		
11,500.00	7,950.00	7,921.70	7,921.70	86.51	137.30	90.00	-2,812.33	-5,298.60	3,034.60	2,834.57	200.04	15.170		
11,600.00	7,950.00	7,921.70	7,921.70	88.89	137.30	90.00	-2,812.33	-5,298.60	2,935.03	2,734.80	200.23	14.658		
11,700.00	7,950.00	7,921.70	7,921.70	91.29	137.30	90.00	-2,812.33	-5,298.60	2,835.49	2,635.05	200.44	14.146		
11,800.00	7,950.00	7,921.70	7,921.70	93.71	137.30	90.00	-2,812.33	-5,298.60	2,735.98	2,535.31	200.67	13.634		
11,900.00	7,950.00	7,921.70	7,921.70	96.14	137.30	90.00	-2,812.33	-5,298.60	2,636.51	2,435.59	200.92	13.122		
12,000.00	7,950.00	7,921.70	7,921.70	98.59	137.30	90.00	-2,812.33	-5,298.60	2,537.08	2,335.89	201.20	12.610		
12,100.00	7,950.00	7,921.70	7,921.70	101.05	137.30	90.00	-2,812.33	-5,298.60	2,437.70	2,236.20	201.50	12.098		
12,200.00	7,950.00	7,921.70	7,921.70	103.52	137.30	90.00	-2,812.33	-5,298.60	2,338.37	2,136.54	201.83	11.586		
12,300.00	7,950.00	7,921.70	7,921.70	106.01	137.30	90.00	-2,812.33	-5,298.60	2,239.10	2,036.90	202.20	11.074		
12,400.00	7,950.00	7,921.70	7,921.70	108.50	137.30	90.00	-2,812.33	-5,298.60	2,139.90	1,937.29	202.61	10.562		
12,500.00	7,950.00	7,921.70	7,921.70	111.01	137.30	90.00	-2,812.33	-5,298.60	2,040.77	1,837.71	203.06	10.050		
12,600.00	7,950.00	7,921.70	7,921.70	113.52	137.30	90.00	-2,812.33	-5,298.60	1,941.74	1,738.16	203.58	9.538		
12,700.00	7,950.00	7,921.70	7,921.70	116.04	137.30	90.00	-2,812.33	-5,298.60	1,842.81	1,638.65	204.16	9.027		
12,800.00	7,950.00	7,921.70	7,921.70	118.57	137.30	90.00	-2,812.33	-5,298.60	1,744.00	1,539.19	204.82	8.515		
12,900.00	7,950.00	7,921.70	7,921.70	121.11	137.30	90.00	-2,812.33	-5,298.60	1,645.34	1,439.76	205.57	8.004		
13,000.00	7,950.00	7,921.70	7,921.70	123.65	137.30	90.00	-2,812.33	-5,298.60	1,546.84	1,340.40	206.45	7.493		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,100.00	7,950.00	7,921.70	7,921.70	126.20	137.30	90.00	-2,812.33	-5,298.60	1,448.56	1,241.09	207.47	6.982		
13,200.00	7,950.00	7,921.70	7,921.70	128.75	137.30	90.00	-2,812.33	-5,298.60	1,350.52	1,141.86	208.66	6.472		
13,300.00	7,950.00	7,921.70	7,921.70	131.31	137.30	90.00	-2,812.33	-5,298.60	1,252.80	1,042.71	210.09	5.963		
13,400.00	7,950.00	7,921.70	7,921.70	133.88	137.30	90.00	-2,812.33	-5,298.60	1,155.46	943.66	211.81	5.455		
13,500.00	7,950.00	7,921.70	7,921.70	136.45	137.30	90.00	-2,812.33	-5,298.60	1,058.63	844.73	213.90	4.949		
13,600.00	7,950.00	7,921.70	7,921.70	139.02	137.30	90.00	-2,812.33	-5,298.60	962.44	745.95	216.49	4.446		
13,700.00	7,950.00	7,921.70	7,921.70	141.60	137.30	90.00	-2,812.33	-5,298.60	867.11	647.37	219.74	3.946		
13,800.00	7,950.00	7,921.70	7,921.70	144.19	137.30	90.00	-2,812.33	-5,298.60	772.96	549.07	223.90	3.452		
13,900.00	7,950.00	7,921.70	7,921.70	146.77	137.30	90.00	-2,812.33	-5,298.60	680.49	451.18	229.31	2.968		
14,000.00	7,950.00	7,921.70	7,921.70	149.36	137.30	90.00	-2,812.33	-5,298.60	590.47	354.00	236.47	2.497		
14,100.00	7,950.00	7,921.70	7,921.70	151.96	137.30	90.00	-2,812.33	-5,298.60	504.23	258.18	246.05	2.049		
14,200.00	7,950.00	7,921.70	7,921.70	154.56	137.30	90.00	-2,812.33	-5,298.60	424.08	165.28	258.80	1.639		
14,300.00	7,950.00	7,921.70	7,921.70	157.16	137.30	90.00	-2,812.33	-5,298.60	354.17	79.36	274.82	1.289	Level 3	
14,400.00	7,950.00	7,921.70	7,921.70	159.76	137.30	90.00	-2,812.33	-5,298.60	301.72	10.40	291.32	1.036	Level 2	
14,500.00	7,950.00	7,921.70	7,921.70	162.37	137.30	90.00	-2,812.33	-5,298.60	276.81	-22.71	299.52	0.924	Level 1	
14,522.03	7,950.00	7,921.70	7,921.70	162.94	137.30	90.00	-2,812.33	-5,298.60	275.94	-23.21	299.15	0.922	Level 1, CC, ES, SF	
14,600.00	7,950.00	7,921.70	7,921.70	164.98	137.30	90.00	-2,812.33	-5,298.60	286.74	-4.32	291.06	0.985	Level 1	
14,700.00	7,950.00	7,921.70	7,921.70	167.59	137.30	90.00	-2,812.33	-5,298.60	328.35	56.86	271.49	1.209	Level 2	
14,800.00	7,950.00	7,921.70	7,921.70	170.20	137.30	90.00	-2,812.33	-5,298.60	391.67	139.92	251.76	1.556		
14,900.00	7,950.00	7,921.70	7,921.70	172.82	137.30	90.00	-2,812.33	-5,298.60	467.97	231.63	236.35	1.980		
15,000.00	7,950.00	7,921.70	7,921.70	175.44	137.30	90.00	-2,812.33	-5,298.60	551.90	326.61	225.29	2.450		
15,100.00	7,950.00	7,921.70	7,921.70	178.06	137.30	90.00	-2,812.33	-5,298.60	640.46	422.95	217.51	2.944		
15,200.00	7,950.00	7,921.70	7,921.70	180.68	137.30	90.00	-2,812.33	-5,298.60	731.97	519.95	212.02	3.452		
15,300.00	7,950.00	7,921.70	7,921.70	183.31	137.30	90.00	-2,812.33	-5,298.60	825.45	617.36	208.10	3.967		
15,400.00	7,950.00	7,921.70	7,921.70	185.93	137.30	90.00	-2,812.33	-5,298.60	920.31	715.06	205.25	4.484		
15,500.00	7,950.00	7,921.70	7,921.70	188.56	137.30	90.00	-2,812.33	-5,298.60	1,016.15	812.99	203.16	5.002		
15,600.00	7,950.00	7,921.70	7,921.70	191.19	137.30	90.00	-2,812.33	-5,298.60	1,112.72	911.13	201.59	5.520		
15,700.00	7,950.00	7,921.70	7,921.70	193.82	137.30	90.00	-2,812.33	-5,298.60	1,209.85	1,009.44	200.41	6.037		
15,800.00	7,950.00	7,921.70	7,921.70	196.46	137.30	90.00	-2,812.33	-5,298.60	1,307.42	1,107.91	199.51	6.553		
15,900.00	7,950.00	7,921.70	7,921.70	199.09	137.30	90.00	-2,812.33	-5,298.60	1,405.32	1,206.51	198.81	7.069		
16,000.00	7,950.00	7,921.70	7,921.70	201.73	137.30	90.00	-2,812.33	-5,298.60	1,503.51	1,305.23	198.27	7.583		
16,100.00	7,950.00	7,921.70	7,921.70	204.37	137.30	90.00	-2,812.33	-5,298.60	1,601.91	1,404.06	197.85	8.096		
16,200.00	7,950.00	7,921.70	7,921.70	207.01	137.30	90.00	-2,812.33	-5,298.60	1,700.50	1,502.98	197.52	8.609		
16,300.00	7,950.00	7,921.70	7,921.70	209.65	137.30	90.00	-2,812.33	-5,298.60	1,799.25	1,601.99	197.26	9.121		
16,400.00	7,950.00	7,921.70	7,921.70	212.29	137.30	90.00	-2,812.33	-5,298.60	1,898.13	1,701.07	197.06	9.632		
16,500.00	7,950.00	7,921.70	7,921.70	214.93	137.30	90.00	-2,812.33	-5,298.60	1,997.12	1,800.22	196.90	10.143		
16,600.00	7,950.00	7,921.70	7,921.70	217.58	137.30	90.00	-2,812.33	-5,298.60	2,096.21	1,899.43	196.78	10.653		
16,700.00	7,950.00	7,921.70	7,921.70	220.22	137.30	90.00	-2,812.33	-5,298.60	2,195.38	1,998.69	196.69	11.162		
16,800.00	7,950.00	7,921.70	7,921.70	222.87	137.30	90.00	-2,812.33	-5,298.60	2,294.62	2,098.00	196.62	11.671		
16,900.00	7,950.00	7,921.70	7,921.70	225.52	137.30	90.00	-2,812.33	-5,298.60	2,393.92	2,197.36	196.56	12.179		
17,000.00	7,950.00	7,921.70	7,921.70	228.16	137.30	90.00	-2,812.33	-5,298.60	2,493.28	2,296.75	196.53	12.687		
17,100.00	7,950.00	7,921.70	7,921.70	230.81	137.30	90.00	-2,812.33	-5,298.60	2,592.69	2,396.18	196.51	13.194		
17,200.00	7,950.00	7,921.70	7,921.70	233.46	137.30	90.00	-2,812.33	-5,298.60	2,692.15	2,495.65	196.50	13.701		
17,300.00	7,950.00	7,921.70	7,921.70	236.12	137.30	90.00	-2,812.33	-5,298.60	2,791.64	2,595.14	196.50	14.207		
17,400.00	7,950.00	7,921.70	7,921.70	238.77	137.30	90.00	-2,812.33	-5,298.60	2,891.17	2,694.66	196.50	14.713		
17,500.00	7,950.00	7,921.70	7,921.70	241.42	137.30	90.00	-2,812.33	-5,298.60	2,990.72	2,794.21	196.52	15.219		
17,600.00	7,950.00	7,921.70	7,921.70	244.08	137.30	90.00	-2,812.33	-5,298.60	3,090.31	2,893.78	196.53	15.724		
17,700.00	7,950.00	7,921.70	7,921.70	246.73	137.30	90.00	-2,812.33	-5,298.60	3,189.92	2,993.37	196.56	16.229		
17,800.00	7,950.00	7,921.70	7,921.70	249.39	137.30	90.00	-2,812.33	-5,298.60	3,289.56	3,092.98	196.59	16.733		
17,900.00	7,950.00	7,921.70	7,921.70	252.04	137.30	90.00	-2,812.33	-5,298.60	3,389.22	3,192.60	196.62	17.238		
18,000.00	7,950.00	7,921.70	7,921.70	254.70	137.30	90.00	-2,812.33	-5,298.60	3,488.90	3,292.25	196.65	17.742		
18,100.00	7,950.00	7,921.70	7,921.70	257.36	137.30	90.00	-2,812.33	-5,298.60	3,588.59	3,391.90	196.69	18.245		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
18,200.00	7,950.00	7,921.70	7,921.70	260.02	137.30	90.00	-2,812.33	-5,298.60	3,688.30	3,491.58	196.73	18.748	
18,300.00	7,950.00	7,921.70	7,921.70	262.67	137.30	90.00	-2,812.33	-5,298.60	3,788.03	3,591.26	196.77	19.251	
18,400.00	7,950.00	7,921.70	7,921.70	265.33	137.30	90.00	-2,812.33	-5,298.60	3,887.77	3,690.96	196.81	19.754	
18,500.00	7,950.00	7,921.70	7,921.70	267.99	137.30	90.00	-2,812.33	-5,298.60	3,987.53	3,790.67	196.86	20.256	
18,600.00	7,950.00	7,921.70	7,921.70	270.66	137.30	90.00	-2,812.33	-5,298.60	4,087.29	3,890.39	196.90	20.758	
18,700.00	7,950.00	7,921.70	7,921.70	273.32	137.30	90.00	-2,812.33	-5,298.60	4,187.07	3,990.12	196.95	21.259	
18,800.00	7,950.00	7,921.70	7,921.70	275.98	137.30	90.00	-2,812.33	-5,298.60	4,286.86	4,089.86	197.00	21.761	
18,847.73	7,950.00	7,921.70	7,921.70	277.25	137.30	90.00	-2,812.33	-5,298.60	4,334.49	4,137.47	197.02	22.000	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-83.44	1,067.90	-9,290.41	9,351.94					
100.00	100.00	18.70	18.70	0.13	0.15	-83.44	1,067.90	-9,290.41	9,351.58	9,351.30	0.28	N/A		
200.00	200.00	118.70	118.70	0.49	1.11	-83.44	1,067.90	-9,290.41	9,351.58	9,349.98	1.60	5,827.714		
250.00	250.00	168.70	168.70	0.67	1.98	-83.44	1,067.90	-9,290.41	9,351.58	9,348.93	2.66	3,520.166		
300.00	300.00	218.70	218.70	0.84	2.86	113.16	1,067.90	-9,290.41	9,351.75	9,348.05	3.70	2,527.348		
400.00	399.93	318.63	318.63	1.19	4.60	113.16	1,067.90	-9,290.41	9,353.13	9,347.34	5.78	1,617.078		
500.00	499.68	418.38	418.38	1.54	6.34	113.15	1,067.90	-9,290.41	9,355.88	9,348.00	7.88	1,187.061		
600.00	599.13	517.83	517.83	1.92	8.08	113.13	1,067.90	-9,290.41	9,360.00	9,350.01	9.99	936.841		
700.00	698.15	616.85	616.85	2.32	9.81	113.11	1,067.90	-9,290.41	9,365.51	9,353.40	12.11	773.128		
800.00	796.63	715.33	715.33	2.74	11.52	113.08	1,067.90	-9,290.41	9,372.41	9,358.16	14.25	657.625		
900.00	894.44	813.14	813.14	3.20	13.23	113.04	1,067.90	-9,290.41	9,380.71	9,364.30	16.41	571.739		
1,000.00	991.46	910.16	910.16	3.70	14.93	112.99	1,067.90	-9,290.41	9,390.41	9,371.83	18.58	505.361		
1,100.00	1,087.58	1,006.28	1,006.28	4.24	16.60	112.93	1,067.90	-9,290.41	9,401.53	9,380.76	20.78	452.524		
1,200.00	1,182.68	1,101.38	1,101.38	4.83	18.26	112.87	1,067.90	-9,290.41	9,414.08	9,391.09	22.99	409.479		
1,300.00	1,276.65	1,204.65	1,195.35	5.46	20.07	112.79	1,067.90	-9,290.41	9,428.06	9,402.67	25.39	371.364		
1,400.00	1,369.36	1,288.06	1,288.06	6.14	21.52	112.70	1,067.90	-9,290.41	9,443.49	9,416.01	27.48	343.649		
1,471.15	1,434.50	1,353.20	1,353.20	6.66	22.66	112.62	1,067.90	-9,290.41	9,455.37	9,426.27	29.10	324.979		
1,500.00	1,460.77	1,379.47	1,379.47	6.87	23.12	112.69	1,067.90	-9,290.41	9,460.34	9,430.58	29.75	317.970		
1,600.00	1,551.82	1,470.52	1,470.52	7.62	24.71	112.90	1,067.90	-9,290.41	9,477.66	9,445.63	32.04	295.839		
1,700.00	1,642.88	1,561.58	1,561.58	8.38	26.29	113.11	1,067.90	-9,290.41	9,495.14	9,460.81	34.33	276.593		
1,800.00	1,733.93	1,652.63	1,652.63	9.15	27.88	113.32	1,067.90	-9,290.41	9,512.76	9,476.13	36.63	259.722		
1,900.00	1,824.98	1,743.68	1,743.68	9.93	29.47	113.53	1,067.90	-9,290.41	9,530.53	9,491.60	38.93	244.821		
2,000.00	1,916.03	1,834.73	1,834.73	10.71	31.06	113.75	1,067.90	-9,290.41	9,548.44	9,507.21	41.23	231.574		
2,100.00	2,007.08	1,925.78	1,925.78	11.49	32.65	113.95	1,067.90	-9,290.41	9,566.50	9,522.96	43.54	219.723		
2,200.00	2,098.13	2,016.83	2,016.83	12.28	34.24	114.16	1,067.90	-9,290.41	9,584.70	9,538.86	45.85	209.063		
2,300.00	2,189.19	2,107.89	2,107.89	13.07	35.83	114.37	1,067.90	-9,290.41	9,603.05	9,554.90	48.15	199.425		
2,400.00	2,280.24	2,201.06	2,198.94	13.86	37.46	114.58	1,067.90	-9,290.41	9,621.54	9,571.04	50.50	190.532		
2,500.00	2,371.29	2,289.99	2,289.99	14.65	39.01	114.79	1,067.90	-9,290.41	9,640.17	9,587.40	52.77	182.688		
2,600.00	2,462.34	2,381.04	2,381.04	15.44	40.60	114.99	1,067.90	-9,290.41	9,658.95	9,603.87	55.08	175.376		
2,700.00	2,553.39	2,472.09	2,472.09	16.24	42.19	115.20	1,067.90	-9,290.41	9,677.86	9,620.48	57.38	168.658		
2,800.00	2,644.45	2,563.15	2,563.15	17.03	43.78	115.40	1,067.90	-9,290.41	9,696.91	9,637.23	59.69	162.463		
2,900.00	2,735.50	2,654.20	2,654.20	17.83	45.36	115.61	1,067.90	-9,290.41	9,716.10	9,654.11	61.99	156.734		
3,000.00	2,826.55	2,745.25	2,745.25	18.63	46.95	115.81	1,067.90	-9,290.41	9,735.43	9,671.14	64.29	151.421		
3,100.00	2,917.60	2,836.30	2,836.30	19.43	48.54	116.02	1,067.90	-9,290.41	9,754.90	9,688.30	66.60	146.479		
3,200.00	3,008.65	2,927.35	2,927.35	20.23	50.13	116.22	1,067.90	-9,290.41	9,774.50	9,705.60	68.90	141.873		
3,300.00	3,099.70	3,018.40	3,018.40	21.03	51.72	116.42	1,067.90	-9,290.41	9,794.24	9,723.04	71.19	137.569		
3,400.00	3,190.76	3,109.46	3,109.46	21.83	53.31	116.62	1,067.90	-9,290.41	9,814.11	9,740.62	73.49	133.539		
3,500.00	3,281.81	3,200.51	3,200.51	22.63	54.90	116.82	1,067.90	-9,290.41	9,834.12	9,758.33	75.79	129.758		
3,600.00	3,372.86	3,308.44	3,291.56	23.43	56.78	117.02	1,067.90	-9,290.41	9,854.25	9,775.88	78.38	125.729		
3,700.00	3,463.91	3,382.61	3,382.61	24.23	58.08	117.22	1,067.90	-9,290.41	9,874.52	9,794.15	80.37	122.856		
3,800.00	3,554.96	3,473.66	3,473.66	25.03	59.67	117.42	1,067.90	-9,290.41	9,894.93	9,812.26	82.67	119.698		
3,900.00	3,646.01	3,564.71	3,564.71	25.83	61.26	117.61	1,067.90	-9,290.41	9,915.46	9,830.50	84.95	116.714		
4,000.00	3,737.07	3,655.77	3,655.77	26.63	62.85	117.81	1,067.90	-9,290.41	9,936.12	9,848.88	87.24	113.891		
4,100.00	3,828.12	3,746.82	3,746.82	27.43	64.43	118.01	1,067.90	-9,290.41	9,956.91	9,867.38	89.53	111.216		
4,200.00	3,919.17	3,837.87	3,837.87	28.24	66.02	118.20	1,067.90	-9,290.41	9,977.83	9,886.02	91.81	108.677		
4,300.00	4,010.22	3,928.92	3,928.92	29.04	67.61	118.40	1,067.90	-9,290.41	9,998.88	9,904.78	94.09	106.265		
9,500.00	7,950.00	7,868.70	7,868.70	60.77	136.37	90.00	1,067.90	-9,290.41	9,923.69	9,729.58	194.12	51.122		
9,600.00	7,950.00	7,868.70	7,868.70	60.76	136.37	90.00	1,067.90	-9,290.41	9,833.00	9,638.35	194.64	50.518		
9,700.00	7,950.00	7,868.70	7,868.70	60.79	136.37	90.00	1,067.90	-9,290.41	9,742.48	9,547.29	195.20	49.911		
9,800.00	7,950.00	7,868.70	7,868.70	60.86	136.37	90.00	1,067.90	-9,290.41	9,652.16	9,456.37	195.78	49.300		
9,900.00	7,950.00	7,868.70	7,868.70	60.99	136.37	90.00	1,067.90	-9,290.41	9,562.02	9,365.62	196.40	48.687		
10,000.00	7,950.00	7,868.70	7,868.70	61.21	136.37	90.00	1,067.90	-9,290.41	9,472.09	9,275.04	197.05	48.070		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	7,950.00	7,868.70	7,868.70	61.56	136.37	90.00	1,067.90	-9,290.41	9,382.35	9,184.63	197.73	47.451		
10,200.00	7,950.00	7,868.70	7,868.70	62.08	136.37	90.00	1,067.90	-9,290.41	9,292.83	9,094.39	198.44	46.829		
10,300.00	7,950.00	7,868.70	7,868.70	62.87	136.37	90.00	1,067.90	-9,290.41	9,203.52	9,004.34	199.19	46.205		
10,400.00	7,950.00	7,868.70	7,868.70	63.95	136.37	90.00	1,067.90	-9,290.41	9,114.44	8,914.47	199.97	45.579		
10,500.00	7,950.00	7,868.70	7,868.70	65.35	136.37	90.00	1,067.90	-9,290.41	9,025.58	8,824.79	200.79	44.951		
10,600.00	7,950.00	7,868.70	7,868.70	67.00	136.37	90.00	1,067.90	-9,290.41	8,936.96	8,735.32	201.64	44.321		
10,700.00	7,950.00	7,868.70	7,868.70	68.85	136.37	90.00	1,067.90	-9,290.41	8,848.58	8,646.05	202.53	43.690		
10,800.00	7,950.00	7,868.70	7,868.70	70.83	136.37	90.00	1,067.90	-9,290.41	8,760.46	8,557.00	203.46	43.057		
10,900.00	7,950.00	7,868.70	7,868.70	72.91	136.37	90.00	1,067.90	-9,290.41	8,672.59	8,468.16	204.43	42.424		
11,000.00	7,950.00	7,868.70	7,868.70	75.07	136.37	90.00	1,067.90	-9,290.41	8,584.98	8,379.55	205.43	41.790		
11,100.00	7,950.00	7,868.70	7,868.70	77.28	136.37	90.00	1,067.90	-9,290.41	8,497.65	8,291.17	206.48	41.156		
11,200.00	7,950.00	7,868.70	7,868.70	79.54	136.37	90.00	1,067.90	-9,290.41	8,410.60	8,203.04	207.56	40.521		
11,300.00	7,950.00	7,868.70	7,868.70	81.83	136.37	90.00	1,067.90	-9,290.41	8,323.84	8,115.15	208.69	39.887		
11,400.00	7,950.00	7,868.70	7,868.70	84.16	136.37	90.00	1,067.90	-9,290.41	8,237.38	8,027.53	209.86	39.253		
11,500.00	7,950.00	7,868.70	7,868.70	86.51	136.37	90.00	1,067.90	-9,290.41	8,151.23	7,940.17	211.07	38.619		
11,600.00	7,950.00	7,868.70	7,868.70	88.89	136.37	90.00	1,067.90	-9,290.41	8,065.41	7,853.08	212.32	37.987		
11,700.00	7,950.00	7,868.70	7,868.70	91.29	136.37	90.00	1,067.90	-9,290.41	7,979.91	7,766.29	213.62	37.356		
11,800.00	7,950.00	7,868.70	7,868.70	93.71	136.37	90.00	1,067.90	-9,290.41	7,894.75	7,679.79	214.96	36.726		
11,900.00	7,950.00	7,868.70	7,868.70	96.14	136.37	90.00	1,067.90	-9,290.41	7,809.94	7,593.59	216.35	36.098		
12,000.00	7,950.00	7,868.70	7,868.70	98.59	136.37	90.00	1,067.90	-9,290.41	7,725.50	7,507.71	217.79	35.473		
12,100.00	7,950.00	7,868.70	7,868.70	101.05	136.37	90.00	1,067.90	-9,290.41	7,641.43	7,422.16	219.27	34.849		
12,200.00	7,950.00	7,868.70	7,868.70	103.52	136.37	90.00	1,067.90	-9,290.41	7,557.75	7,336.95	220.80	34.229		
12,300.00	7,950.00	7,868.70	7,868.70	106.01	136.37	90.00	1,067.90	-9,290.41	7,474.48	7,252.09	222.38	33.611		
12,400.00	7,950.00	7,868.70	7,868.70	108.50	136.37	90.00	1,067.90	-9,290.41	7,391.61	7,167.60	224.01	32.997		
12,500.00	7,950.00	7,868.70	7,868.70	111.01	136.37	90.00	1,067.90	-9,290.41	7,309.18	7,083.49	225.69	32.386		
12,600.00	7,950.00	7,868.70	7,868.70	113.52	136.37	90.00	1,067.90	-9,290.41	7,227.19	6,999.76	227.42	31.779		
12,700.00	7,950.00	7,868.70	7,868.70	116.04	136.37	90.00	1,067.90	-9,290.41	7,145.65	6,916.45	229.21	31.176		
12,800.00	7,950.00	7,868.70	7,868.70	118.57	136.37	90.00	1,067.90	-9,290.41	7,064.60	6,833.55	231.04	30.577		
12,900.00	7,950.00	7,868.70	7,868.70	121.11	136.37	90.00	1,067.90	-9,290.41	6,984.03	6,751.10	232.93	29.983		
13,000.00	7,950.00	7,868.70	7,868.70	123.65	136.37	90.00	1,067.90	-9,290.41	6,903.97	6,669.09	234.88	29.394		
13,100.00	7,950.00	7,868.70	7,868.70	126.20	136.37	90.00	1,067.90	-9,290.41	6,824.44	6,587.56	236.88	28.810		
13,200.00	7,950.00	7,868.70	7,868.70	128.75	136.37	90.00	1,067.90	-9,290.41	6,745.45	6,506.52	238.93	28.232		
13,300.00	7,950.00	7,868.70	7,868.70	131.31	136.37	90.00	1,067.90	-9,290.41	6,667.03	6,425.98	241.04	27.659		
13,400.00	7,950.00	7,868.70	7,868.70	133.88	136.37	90.00	1,067.90	-9,290.41	6,589.19	6,345.97	243.21	27.092		
13,500.00	7,950.00	7,868.70	7,868.70	136.45	136.37	90.00	1,067.90	-9,290.41	6,511.95	6,266.51	245.44	26.532		
13,600.00	7,950.00	7,868.70	7,868.70	139.02	136.37	90.00	1,067.90	-9,290.41	6,435.35	6,187.62	247.73	25.977		
13,700.00	7,950.00	7,868.70	7,868.70	141.60	136.37	90.00	1,067.90	-9,290.41	6,359.39	6,109.32	250.07	25.430		
13,800.00	7,950.00	7,868.70	7,868.70	144.19	136.37	90.00	1,067.90	-9,290.41	6,284.11	6,031.63	252.48	24.890		
13,900.00	7,950.00	7,868.70	7,868.70	146.77	136.37	90.00	1,067.90	-9,290.41	6,209.52	5,954.57	254.95	24.356		
14,000.00	7,950.00	7,868.70	7,868.70	149.36	136.37	90.00	1,067.90	-9,290.41	6,135.66	5,878.18	257.47	23.830		
14,100.00	7,950.00	7,868.70	7,868.70	151.96	136.37	90.00	1,067.90	-9,290.41	6,062.54	5,802.48	260.06	23.312		
14,200.00	7,950.00	7,868.70	7,868.70	154.56	136.37	90.00	1,067.90	-9,290.41	5,990.21	5,727.50	262.71	22.802		
14,300.00	7,950.00	7,868.70	7,868.70	157.16	136.37	90.00	1,067.90	-9,290.41	5,918.67	5,653.25	265.42	22.299		
14,400.00	7,950.00	7,868.70	7,868.70	159.76	136.37	90.00	1,067.90	-9,290.41	5,847.98	5,579.78	268.19	21.805		
14,500.00	7,950.00	7,868.70	7,868.70	162.37	136.37	90.00	1,067.90	-9,290.41	5,778.15	5,507.12	271.03	21.319		
14,600.00	7,950.00	7,868.70	7,868.70	164.98	136.37	90.00	1,067.90	-9,290.41	5,709.22	5,435.29	273.93	20.842		
14,700.00	7,950.00	7,868.70	7,868.70	167.59	136.37	90.00	1,067.90	-9,290.41	5,641.21	5,364.33	276.88	20.374		
14,800.00	7,950.00	7,868.70	7,868.70	170.20	136.37	90.00	1,067.90	-9,290.41	5,574.18	5,294.27	279.90	19.915		
14,900.00	7,950.00	7,868.70	7,868.70	172.82	136.37	90.00	1,067.90	-9,290.41	5,508.14	5,225.16	282.98	19.465		
15,000.00	7,950.00	7,868.70	7,868.70	175.44	136.37	90.00	1,067.90	-9,290.41	5,443.14	5,157.02	286.12	19.024		
15,100.00	7,950.00	7,868.70	7,868.70	178.06	136.37	90.00	1,067.90	-9,290.41	5,379.21	5,089.90	289.31	18.593		
15,200.00	7,950.00	7,868.70	7,868.70	180.68	136.37	90.00	1,067.90	-9,290.41	5,316.39	5,023.83	292.57	18.172		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - ABND VERT STATE-SMITH 1-16 - OWB - Design #1	Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
15,300.00	7,950.00	7,868.70	7,868.70	183.31	136.37	90.00	1,067.90	-9,290.41	5,254.73	4,958.86	295.87	17.760			
15,400.00	7,950.00	7,868.70	7,868.70	185.93	136.37	90.00	1,067.90	-9,290.41	5,194.26	4,895.02	299.23	17.359			
15,500.00	7,950.00	7,868.70	7,868.70	188.56	136.37	90.00	1,067.90	-9,290.41	5,135.02	4,832.38	302.65	16.967			
15,600.00	7,950.00	7,868.70	7,868.70	191.19	136.37	90.00	1,067.90	-9,290.41	5,077.07	4,770.96	306.11	16.586			
15,700.00	7,950.00	7,868.70	7,868.70	193.82	136.37	90.00	1,067.90	-9,290.41	5,020.43	4,710.82	309.61	16.215			
15,800.00	7,950.00	7,868.70	7,868.70	196.46	136.37	90.00	1,067.90	-9,290.41	4,965.17	4,652.01	313.16	15.855			
15,900.00	7,950.00	7,868.70	7,868.70	199.09	136.37	90.00	1,067.90	-9,290.41	4,911.32	4,594.57	316.75	15.505			
16,000.00	7,950.00	7,868.70	7,868.70	201.73	136.37	90.00	1,067.90	-9,290.41	4,858.93	4,538.55	320.38	15.166			
16,100.00	7,950.00	7,868.70	7,868.70	204.37	136.37	90.00	1,067.90	-9,290.41	4,808.05	4,484.02	324.03	14.838			
16,200.00	7,950.00	7,868.70	7,868.70	207.01	136.37	90.00	1,067.90	-9,290.41	4,758.73	4,431.01	327.71	14.521			
16,300.00	7,950.00	7,868.70	7,868.70	209.65	136.37	90.00	1,067.90	-9,290.41	4,711.01	4,379.60	331.42	14.215			
16,400.00	7,950.00	7,868.70	7,868.70	212.29	136.37	90.00	1,067.90	-9,290.41	4,664.95	4,329.82	335.13	13.920			
16,500.00	7,950.00	7,868.70	7,868.70	214.93	136.37	90.00	1,067.90	-9,290.41	4,620.60	4,281.74	338.86	13.636			
16,600.00	7,950.00	7,868.70	7,868.70	217.58	136.37	90.00	1,067.90	-9,290.41	4,578.00	4,235.40	342.59	13.363			
16,700.00	7,950.00	7,868.70	7,868.70	220.22	136.37	90.00	1,067.90	-9,290.41	4,537.20	4,190.88	346.32	13.101			
16,800.00	7,950.00	7,868.70	7,868.70	222.87	136.37	90.00	1,067.90	-9,290.41	4,498.26	4,148.22	350.04	12.851			
16,900.00	7,950.00	7,868.70	7,868.70	225.52	136.37	90.00	1,067.90	-9,290.41	4,461.22	4,107.48	353.74	12.612			
17,000.00	7,950.00	7,868.70	7,868.70	228.16	136.37	90.00	1,067.90	-9,290.41	4,426.13	4,068.72	357.41	12.384			
17,100.00	7,950.00	7,868.70	7,868.70	230.81	136.37	90.00	1,067.90	-9,290.41	4,393.04	4,031.99	361.05	12.167			
17,200.00	7,950.00	7,868.70	7,868.70	233.46	136.37	90.00	1,067.90	-9,290.41	4,361.99	3,997.34	364.65	11.962			
17,300.00	7,950.00	7,868.70	7,868.70	236.12	136.37	90.00	1,067.90	-9,290.41	4,333.02	3,964.83	368.19	11.768			
17,400.00	7,950.00	7,868.70	7,868.70	238.77	136.37	90.00	1,067.90	-9,290.41	4,306.19	3,934.51	371.68	11.586			
17,500.00	7,950.00	7,868.70	7,868.70	241.42	136.37	90.00	1,067.90	-9,290.41	4,281.52	3,906.42	375.10	11.414			
17,600.00	7,950.00	7,868.70	7,868.70	244.08	136.37	90.00	1,067.90	-9,290.41	4,259.05	3,880.62	378.44	11.254			
17,700.00	7,950.00	7,868.70	7,868.70	246.73	136.37	90.00	1,067.90	-9,290.41	4,238.83	3,857.14	381.69	11.105			
17,800.00	7,950.00	7,868.70	7,868.70	249.39	136.37	90.00	1,067.90	-9,290.41	4,220.88	3,836.03	384.85	10.968			
17,900.00	7,950.00	7,868.70	7,868.70	252.04	136.37	90.00	1,067.90	-9,290.41	4,205.23	3,817.32	387.91	10.841			
18,000.00	7,950.00	7,868.70	7,868.70	254.70	136.37	90.00	1,067.90	-9,290.41	4,191.91	3,801.06	390.86	10.725			
18,100.00	7,950.00	7,868.70	7,868.70	257.36	136.37	90.00	1,067.90	-9,290.41	4,180.94	3,787.26	393.68	10.620			
18,200.00	7,950.00	7,868.70	7,868.70	260.02	136.37	90.00	1,067.90	-9,290.41	4,172.34	3,775.95	396.39	10.526			
18,300.00	7,950.00	7,868.70	7,868.70	262.67	136.37	90.00	1,067.90	-9,290.41	4,166.12	3,767.16	398.96	10.442			
18,400.00	7,950.00	7,868.70	7,868.70	265.33	136.37	90.00	1,067.90	-9,290.41	4,162.30	3,760.90	401.39	10.370			
18,500.00	7,950.00	7,868.70	7,868.70	267.99	136.37	90.00	1,067.90	-9,290.41	4,160.87	3,757.18	403.69	10.307			
18,509.27	7,950.00	7,868.70	7,868.70	268.24	136.37	90.00	1,067.90	-9,290.41	4,160.86	3,756.97	403.89	10.302	CC		
18,600.00	7,950.00	7,868.70	7,868.70	270.66	136.37	90.00	1,067.90	-9,290.41	4,161.85	3,756.02	405.83	10.255	ES		
18,700.00	7,950.00	7,868.70	7,868.70	273.32	136.37	90.00	1,067.90	-9,290.41	4,165.23	3,757.40	407.83	10.213			
18,800.00	7,950.00	7,868.70	7,868.70	275.98	136.37	90.00	1,067.90	-9,290.41	4,171.01	3,761.34	409.67	10.181			
18,847.73	7,950.00	7,868.70	7,868.70	277.25	136.37	90.00	1,067.90	-9,290.41	4,174.60	3,764.11	410.49	10.170	SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL SURVEY	Offset Site Error:	0.00 usft
Survey Program:													94-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-179.68	-49.91	-0.28	49.91						
100.00	100.00	99.86	99.86	0.13	0.13	-179.60	-49.75	-0.35	49.75	49.48	0.27	186.998			
200.00	200.00	199.80	199.80	0.49	0.50	-179.23	-49.49	-0.66	49.50	48.50	0.99	49.782			
250.00	250.00	249.80	249.80	0.67	0.68	-178.98	-49.39	-0.88	49.40	48.04	1.35	36.528			
300.00	300.00	299.80	299.79	0.84	0.86	18.03	-49.28	-1.09	48.88	47.18	1.70	28.707			
400.00	399.93	399.70	399.70	1.19	1.22	19.99	-49.09	-1.54	45.41	43.01	2.40	18.906			
500.00	499.68	499.40	499.40	1.54	1.57	24.29	-48.95	-2.02	38.84	35.73	3.11	12.477			
600.00	599.13	598.86	598.85	1.92	1.93	33.66	-48.87	-2.50	29.68	25.85	3.83	7.743			
700.00	698.15	697.88	697.87	2.32	2.28	58.12	-48.52	-2.79	19.55	14.97	4.58	4.268			
759.30	756.62	756.28	756.27	2.57	2.49	89.10	-48.29	-3.01	16.69	11.63	5.06	3.300	CC, ES, SF		
800.00	796.63	796.25	796.24	2.74	2.63	113.40	-48.12	-3.18	18.37	13.01	5.36	3.429			
900.00	894.44	893.96	893.95	3.20	2.98	148.58	-47.70	-3.60	33.44	27.39	6.04	5.532			
1,000.00	991.46	991.05	991.04	3.70	3.33	161.38	-47.44	-3.93	56.02	49.28	6.75	8.305			
1,100.00	1,087.58	1,087.33	1,087.31	4.24	3.67	167.14	-47.55	-4.23	82.72	75.27	7.46	11.096			
1,200.00	1,182.68	1,182.61	1,182.59	4.83	4.00	170.33	-47.82	-4.51	112.98	104.82	8.17	13.835			
1,300.00	1,276.65	1,276.54	1,276.53	5.46	4.33	172.31	-48.13	-4.79	146.68	137.80	8.88	16.518			
1,400.00	1,369.36	1,369.35	1,369.34	6.14	4.65	173.64	-48.41	-5.16	183.79	174.19	9.60	19.150			
1,471.15	1,434.50	1,434.39	1,434.37	6.66	4.88	174.32	-48.62	-5.47	212.18	202.07	10.11	20.988			
1,500.00	1,460.77	1,460.57	1,460.55	6.87	4.98	174.58	-48.69	-5.60	224.05	213.73	10.32	21.715			
1,600.00	1,551.82	1,551.79	1,551.78	7.62	5.30	175.30	-48.92	-6.08	265.22	254.19	11.03	24.047			
1,700.00	1,642.88	1,642.77	1,642.75	8.38	5.62	175.81	-49.21	-6.61	306.38	294.64	11.74	26.086			
1,800.00	1,733.93	1,733.38	1,733.35	9.15	5.95	176.18	-49.45	-7.27	347.65	335.19	12.46	27.894			
1,900.00	1,824.98	1,824.53	1,824.51	9.93	6.27	176.47	-49.61	-7.96	389.01	375.82	13.19	29.493			
2,000.00	1,916.03	1,915.67	1,915.64	10.71	6.60	176.71	-49.82	-8.57	430.31	416.39	13.92	30.916			
2,100.00	2,007.08	2,006.66	2,006.63	11.49	6.92	176.92	-50.01	-9.18	471.63	456.98	14.65	32.196			
2,200.00	2,098.13	2,097.76	2,097.73	12.28	7.25	177.09	-50.18	-9.76	512.96	497.58	15.38	33.348			
2,300.00	2,189.19	2,188.99	2,188.96	13.07	7.58	177.25	-50.36	-10.29	554.27	538.15	16.12	34.388			
2,400.00	2,280.24	2,280.11	2,280.08	13.86	7.89	177.39	-50.53	-10.73	595.56	578.71	16.85	35.352			
2,500.00	2,371.29	2,371.06	2,371.02	14.65	8.20	177.55	-50.58	-10.81	636.85	619.29	17.57	36.253			
2,600.00	2,462.34	2,462.31	2,462.27	15.44	8.51	177.71	-50.54	-10.73	678.18	659.90	18.28	37.095			
2,700.00	2,553.39	2,555.20	2,555.17	16.24	8.82	177.85	-50.69	-10.54	719.31	700.29	19.02	37.827			
2,800.00	2,644.45	2,643.77	2,643.73	17.03	9.13	177.97	-50.77	-10.49	760.54	740.81	19.73	38.551			
2,900.00	2,735.50	2,733.95	2,733.91	17.83	9.45	178.06	-50.69	-10.59	801.97	781.50	20.46	39.196			
3,000.00	2,826.55	2,825.72	2,825.68	18.63	9.76	178.16	-50.59	-10.63	843.40	822.20	21.20	39.787			
3,100.00	2,917.60	2,917.53	2,917.49	19.43	10.08	178.25	-50.57	-10.63	884.75	862.81	21.94	40.333			
3,200.00	3,008.65	3,007.94	3,007.90	20.23	10.40	178.32	-50.57	-10.66	926.09	903.42	22.67	40.853			
3,300.00	3,099.70	3,098.64	3,098.61	21.03	10.72	178.39	-50.52	-10.71	967.49	944.08	23.41	41.336			
3,400.00	3,190.76	3,189.96	3,189.93	21.83	11.05	178.45	-50.49	-10.83	1,008.88	984.73	24.15	41.774			
3,500.00	3,281.81	3,279.36	3,279.32	22.63	11.36	178.50	-50.44	-11.00	1,050.33	1,025.45	24.88	42.213			
3,600.00	3,372.86	3,371.85	3,371.81	23.43	11.69	178.56	-50.31	-11.11	1,091.81	1,066.19	25.63	42.600			
3,700.00	3,463.91	3,460.61	3,460.57	24.23	11.99	178.61	-50.20	-11.14	1,133.27	1,106.92	26.35	43.013			
3,800.00	3,554.96	3,555.27	3,555.23	25.03	12.33	178.65	-50.08	-11.35	1,174.78	1,147.66	27.11	43.326			
3,900.00	3,646.01	3,648.97	3,648.93	25.83	12.65	178.69	-50.30	-11.45	1,215.94	1,188.07	27.87	43.624			
4,000.00	3,737.07	3,738.87	3,738.83	26.63	12.96	178.73	-50.52	-11.40	1,257.06	1,228.46	28.60	43.958			
4,100.00	3,828.12	3,828.43	3,828.39	27.43	13.27	178.78	-50.56	-11.25	1,298.31	1,268.99	29.32	44.280			
4,200.00	3,919.17	3,918.96	3,918.93	28.24	13.58	178.81	-50.60	-11.33	1,339.64	1,309.58	30.05	44.575			
4,300.00	4,010.22	4,010.22	4,010.18	29.04	13.89	178.85	-50.60	-11.33	1,380.97	1,350.18	30.79	44.855			
4,400.00	4,101.27	4,100.73	4,100.70	29.84	14.20	178.88	-50.61	-11.30	1,422.30	1,390.78	31.51	45.131			
4,500.00	4,192.33	4,191.48	4,191.45	30.65	14.51	178.91	-50.56	-11.28	1,463.68	1,431.43	32.25	45.389			
4,600.00	4,283.38	4,282.65	4,282.61	31.45	14.82	178.95	-50.52	-11.24	1,505.05	1,472.06	32.98	45.631			
4,700.00	4,374.43	4,373.46	4,373.43	32.25	15.13	178.98	-50.46	-11.16	1,546.43	1,512.71	33.72	45.865			
4,800.00	4,465.48	4,463.92	4,463.88	33.05	15.45	179.01	-50.40	-11.13	1,587.82	1,553.37	34.45	46.090			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL SURVEY	Offset Site Error:	0.00 usft
Survey Program: 94-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,553.34	4,553.30	33.86	15.76	179.04	-50.25	-11.04	1,629.27	1,594.10	35.18	46.316			
5,000.00	4,647.58	4,653.92	4,653.89	34.66	16.10	179.07	-50.11	-10.96	1,670.74	1,634.75	35.99	46.423			
5,100.00	4,738.64	5,100.00	4,787.21	35.47	17.64	179.08	-52.86	-10.67	1,710.05	1,671.94	38.11	44.868			
5,200.00	4,829.69	4,925.95	4,925.68	36.27	17.05	179.01	-60.00	-11.52	1,746.79	1,708.69	38.10	45.845			
5,300.00	4,920.74	5,045.62	5,045.09	37.07	17.46	178.93	-67.87	-12.18	1,782.55	1,743.51	39.03	45.668			
5,400.00	5,011.79	5,188.31	5,187.26	37.88	17.96	178.90	-79.84	-10.67	1,816.18	1,776.09	40.09	45.301			
5,500.00	5,102.84	5,332.33	5,330.46	38.68	18.46	178.97	-94.02	-4.96	1,847.86	1,806.73	41.13	44.925			
5,600.00	5,193.89	5,687.09	5,677.96	39.48	19.75	179.06	-160.35	16.18	1,869.32	1,826.37	42.95	43.524			
5,700.00	5,284.95	5,829.67	5,814.89	40.29	20.30	178.93	-199.46	23.02	1,883.64	1,839.78	43.86	42.947			
5,800.00	5,376.00	5,953.09	5,933.01	41.09	20.80	178.83	-234.62	29.72	1,897.00	1,852.28	44.72	42.420			
5,900.00	5,467.05	6,073.98	6,048.33	41.90	21.31	178.68	-270.50	34.96	1,909.59	1,864.01	45.58	41.899			
6,000.00	5,558.10	6,237.00	6,201.68	42.70	22.02	178.18	-325.63	33.66	1,919.46	1,872.95	46.52	41.263			
6,100.00	5,649.15	6,378.81	6,332.44	43.51	22.69	177.47	-379.76	24.81	1,926.58	1,879.14	47.44	40.615			
6,200.00	5,740.21	6,532.76	6,472.11	44.31	23.46	176.54	-442.90	10.61	1,932.05	1,883.65	48.40	39.921			
6,300.00	5,831.26	6,724.48	6,640.85	45.11	24.51	175.17	-531.13	-11.46	1,932.68	1,883.25	49.43	39.099			
6,400.00	5,922.31	6,847.10	6,746.64	45.92	25.23	174.21	-591.15	-26.99	1,931.32	1,880.88	50.44	38.289			
6,500.00	6,013.36	7,076.36	6,943.43	46.72	26.69	172.64	-707.00	-46.02	1,928.56	1,877.05	51.51	37.441			
6,600.00	6,104.41	7,205.11	7,052.87	47.53	27.56	172.04	-774.77	-44.95	1,919.37	1,866.90	52.47	36.577			
6,700.00	6,195.46	7,310.13	7,142.10	48.33	28.29	171.58	-830.12	-42.87	1,909.89	1,856.43	53.46	35.723			
6,800.00	6,286.52	7,418.30	7,234.02	49.14	29.06	171.16	-886.96	-38.53	1,899.85	1,845.40	54.45	34.893			
6,900.00	6,377.57	7,514.10	7,315.51	49.94	29.75	170.81	-937.11	-33.86	1,889.76	1,834.32	55.45	34.081			
7,000.00	6,468.62	7,567.63	7,361.17	50.75	30.14	170.60	-964.97	-31.81	1,880.77	1,824.27	56.50	33.289			
7,100.00	6,559.67	7,604.84	7,393.23	51.55	30.41	170.41	-983.85	-32.18	1,874.98	1,817.45	57.53	32.591			
7,200.00	6,650.72	7,710.19	7,483.00	52.36	31.20	169.61	-1,037.83	-42.47	1,872.25	1,813.53	58.72	31.883			
7,300.00	6,741.77	7,786.34	7,543.43	53.16	31.79	168.71	-1,080.94	-59.15	1,868.42	1,808.40	60.01	31.133			
7,381.16	6,815.67	7,823.00	7,571.01	53.81	32.08	168.17	-1,102.13	-70.71	1,867.21	1,806.23	60.99	30.617			
7,400.00	6,832.83	7,823.00	7,571.01	53.97	32.08	168.17	-1,102.13	-70.71	1,867.31	1,806.16	61.15	30.538			
7,500.00	6,923.88	7,823.00	7,571.01	54.77	32.08	168.17	-1,102.13	-70.71	1,870.99	1,809.07	61.92	30.215			
7,600.00	7,014.93	7,874.66	7,608.62	55.58	32.47	167.31	-1,130.94	-91.24	1,877.23	1,814.13	63.10	29.750			
7,700.00	7,105.98	7,918.00	7,639.23	56.38	32.80	166.50	-1,153.14	-112.39	1,889.34	1,825.15	64.19	29.435			
7,800.00	7,197.03	7,918.00	7,639.23	57.19	32.80	166.50	-1,153.14	-112.39	1,904.70	1,840.08	64.62	29.474			
7,900.00	7,288.09	7,918.00	7,639.23	57.99	32.80	166.50	-1,153.14	-112.39	1,925.14	1,860.23	64.91	29.658			
7,982.08	7,362.82	7,918.00	7,639.23	58.65	32.80	166.50	-1,153.14	-112.39	1,945.60	1,880.56	65.04	29.914			
8,000.00	7,379.16	7,952.93	7,663.16	58.79	33.03	161.53	-1,169.66	-131.73	1,949.15	1,883.51	65.64	29.695			
8,050.00	7,424.95	7,962.70	7,669.74	59.18	33.10	148.97	-1,174.06	-137.46	1,961.07	1,895.24	65.82	29.793			
8,100.00	7,470.74	7,972.89	7,676.54	59.53	33.17	136.54	-1,178.55	-143.58	1,971.81	1,905.84	65.96	29.892			
8,150.00	7,516.17	8,013.00	7,702.68	59.84	33.44	124.74	-1,195.16	-169.05	1,982.18	1,915.56	66.61	29.757			
8,200.00	7,560.91	8,013.00	7,702.68	60.13	33.44	115.12	-1,195.16	-169.05	1,989.76	1,923.30	66.46	29.939			
8,250.00	7,604.61	8,013.00	7,702.68	60.38	33.44	107.18	-1,195.16	-169.05	1,996.16	1,929.91	66.25	30.132			
8,300.00	7,646.94	8,013.00	7,702.68	60.60	33.44	100.76	-1,195.16	-169.05	2,001.33	1,935.35	65.97	30.336			
8,350.00	7,687.58	8,050.06	7,725.49	60.78	33.68	95.38	-1,209.81	-194.32	2,004.65	1,938.23	66.42	30.183			
8,400.00	7,726.22	8,077.68	7,741.35	60.94	33.86	91.21	-1,220.83	-214.06	2,006.05	1,939.41	66.64	30.102			
8,450.00	7,762.57	8,107.00	7,757.09	61.07	34.06	87.97	-1,232.59	-235.81	2,005.47	1,938.59	66.89	29.982			
8,500.00	7,796.34	8,107.00	7,757.09	61.18	34.06	85.67	-1,232.59	-235.81	2,003.20	1,936.72	66.48	30.134			
8,550.00	7,827.28	8,107.00	7,757.09	61.26	34.06	83.95	-1,232.59	-235.81	1,999.61	1,933.56	66.06	30.271			
8,600.00	7,855.16	8,146.10	7,776.40	61.31	34.32	82.68	-1,247.67	-266.28	1,993.32	1,926.79	66.53	29.962			
8,650.00	7,879.76	8,159.49	7,782.57	61.35	34.41	81.96	-1,252.52	-277.13	1,986.03	1,919.60	66.44	29.893			
8,700.00	7,900.90	8,201.00	7,800.25	61.37	34.69	81.69	-1,266.50	-311.97	1,977.93	1,910.91	67.02	29.511			
8,750.00	7,918.42	8,201.00	7,800.25	61.37	34.69	81.82	-1,266.50	-311.97	1,967.05	1,900.36	66.70	29.493			
8,800.00	7,932.18	8,201.00	7,800.25	61.35	34.69	82.26	-1,266.50	-311.97	1,955.07	1,888.64	66.43	29.430			
8,850.00	7,942.07	8,201.00	7,800.25	61.31	34.69	83.00	-1,266.50	-311.97	1,942.04	1,875.80	66.24	29.319			
8,900.00	7,948.03	8,201.00	7,800.25	61.26	34.69	84.02	-1,266.50	-311.97	1,928.06	1,861.93	66.13	29.156			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL SURVEY	Offset Site Error:	0.00 usft
Survey Program:													94-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
8,949.68	7,950.00	8,234.23	7,812.65	61.20	34.90	85.66	-1,276.41	-341.16	1,912.16	1,845.31	66.84	28.607			
9,000.00	7,950.00	8,245.78	7,816.55	61.14	34.97	85.78	-1,279.55	-351.56	1,896.48	1,829.36	67.13	28.252			
9,100.00	7,950.00	8,296.00	7,831.03	61.03	35.31	86.21	-1,291.33	-398.16	1,868.83	1,800.45	68.38	27.329			
9,200.00	7,950.00	8,296.00	7,831.03	60.93	35.31	86.21	-1,291.33	-398.16	1,843.52	1,774.77	68.75	26.815			
9,300.00	7,950.00	8,296.00	7,831.03	60.85	35.31	86.21	-1,291.33	-398.16	1,823.35	1,754.02	69.33	26.298			
9,400.00	7,950.00	8,341.76	7,841.25	60.80	35.58	86.52	-1,299.02	-442.08	1,806.17	1,735.22	70.95	25.456			
9,500.00	7,950.00	8,391.00	7,849.77	60.77	35.90	86.78	-1,303.65	-490.33	1,794.32	1,721.61	72.71	24.677			
9,600.00	7,950.00	8,391.00	7,849.77	60.76	35.90	86.78	-1,303.65	-490.33	1,785.26	1,711.56	73.71	24.220			
9,700.00	7,950.00	8,426.00	7,853.98	60.79	36.09	86.92	-1,305.01	-525.05	1,780.82	1,705.39	75.43	23.609			
9,772.09	7,950.00	8,451.45	7,855.86	60.84	36.25	86.98	-1,305.27	-550.42	1,779.87	1,703.17	76.71	23.204			
9,800.00	7,950.00	8,485.00	7,856.83	60.86	36.47	87.01	-1,304.68	-583.95	1,780.46	1,702.89	77.57	22.954			
9,805.62	7,950.00	8,485.00	7,856.83	60.87	36.47	87.01	-1,304.68	-583.95	1,780.45	1,702.81	77.64	22.934			
9,900.00	7,950.00	8,507.38	7,856.91	60.99	36.61	87.01	-1,303.87	-606.32	1,782.74	1,703.57	79.17	22.519			
10,000.00	7,950.00	8,579.00	7,857.26	61.21	37.11	87.03	-1,300.33	-677.85	1,787.70	1,706.06	81.64	21.896			
10,100.00	7,950.00	8,702.37	7,858.22	61.56	38.18	87.07	-1,294.84	-801.09	1,792.13	1,706.75	85.38	20.989			
10,200.00	7,950.00	8,769.00	7,858.81	62.08	38.87	87.10	-1,291.34	-867.62	1,797.42	1,709.36	88.06	20.410			
10,300.00	7,950.00	8,828.27	7,859.30	62.87	39.54	87.12	-1,287.01	-926.73	1,804.75	1,714.09	90.66	19.906			
10,400.00	7,950.00	8,892.14	7,859.82	63.95	40.32	87.14	-1,281.01	-990.31	1,814.18	1,720.77	93.41	19.421			
10,500.00	7,950.00	8,960.82	7,860.37	65.35	41.22	87.17	-1,273.33	-1,058.56	1,825.42	1,729.08	96.34	18.948			
10,600.00	7,950.00	9,115.42	7,860.92	67.00	43.53	87.22	-1,256.26	-1,212.21	1,836.87	1,734.96	101.91	18.024			
10,700.00	7,950.00	9,407.73	7,864.04	68.85	48.95	87.33	-1,249.02	-1,504.18	1,836.95	1,724.67	112.28	16.360			
10,800.00	7,950.00	9,484.72	7,864.74	70.83	50.53	87.35	-1,249.65	-1,581.16	1,836.19	1,720.21	115.98	15.832			
10,900.00	7,950.00	9,683.10	7,866.60	72.91	54.78	87.40	-1,254.01	-1,779.45	1,834.78	1,710.96	123.82	14.819			
11,000.00	7,950.00	9,879.08	7,868.87	75.07	59.20	87.45	-1,270.48	-1,974.70	1,826.25	1,694.63	131.61	13.876			
11,100.00	7,950.00	9,979.93	7,869.90	77.28	61.54	87.47	-1,281.68	-2,074.92	1,815.22	1,678.85	136.37	13.311			
11,200.00	7,950.00	10,076.00	7,871.17	79.54	63.79	87.49	-1,291.97	-2,170.43	1,804.58	1,663.57	141.01	12.797			
11,300.00	7,950.00	10,159.29	7,872.23	81.83	65.76	87.51	-1,300.86	-2,253.24	1,794.04	1,648.77	145.27	12.350			
11,400.00	7,950.00	10,229.00	7,873.07	84.16	67.42	87.53	-1,306.66	-2,322.70	1,785.59	1,636.50	149.09	11.977			
11,500.00	7,950.00	10,266.46	7,873.53	86.51	68.31	87.54	-1,308.82	-2,360.09	1,779.49	1,627.75	151.75	11.727			
11,600.00	7,950.00	10,323.00	7,874.26	88.89	69.67	87.57	-1,310.52	-2,416.60	1,776.36	1,621.33	155.02	11.459			
11,668.74	7,950.00	10,346.47	7,874.56	90.54	70.22	87.58	-1,310.65	-2,440.07	1,775.85	1,619.20	156.65	11.337			
11,700.00	7,950.00	10,360.10	7,874.73	91.29	70.55	87.58	-1,310.53	-2,453.69	1,776.13	1,618.65	157.48	11.279			
11,800.00	7,950.00	10,417.00	7,875.34	93.71	71.91	87.60	-1,308.60	-2,510.55	1,779.22	1,618.59	160.63	11.076			
11,900.00	7,950.00	10,481.85	7,876.04	96.14	73.45	87.63	-1,304.98	-2,575.30	1,784.57	1,620.49	164.08	10.876			
12,000.00	7,950.00	10,658.60	7,878.17	98.59	77.73	87.71	-1,297.82	-2,751.87	1,789.07	1,616.73	172.33	10.381			
12,100.00	7,950.00	10,766.97	7,879.41	101.05	80.40	87.75	-1,297.20	-2,860.23	1,789.66	1,611.96	177.70	10.071			
12,200.00	7,950.00	10,844.77	7,880.09	103.52	82.32	87.77	-1,296.02	-2,938.02	1,791.27	1,609.46	181.81	9.852			
12,300.00	7,950.00	10,940.93	7,880.96	106.01	84.71	87.80	-1,293.51	-3,034.14	1,793.95	1,607.24	186.71	9.608			
12,400.00	7,950.00	11,154.82	7,883.22	108.50	90.07	87.87	-1,295.51	-3,247.96	1,792.92	1,596.53	196.38	9.130			
12,500.00	7,950.00	11,229.34	7,884.03	111.01	91.96	87.90	-1,298.18	-3,322.42	1,789.50	1,589.00	200.50	8.925			
12,600.00	7,950.00	11,355.74	7,885.48	113.52	95.17	87.94	-1,301.32	-3,448.77	1,787.31	1,580.66	206.64	8.649			
12,700.00	7,950.00	11,442.50	7,886.66	116.04	97.38	87.97	-1,304.57	-3,535.47	1,783.65	1,572.38	211.27	8.443			
12,800.00	7,950.00	11,596.06	7,888.63	118.57	101.30	88.03	-1,312.30	-3,688.81	1,778.55	1,560.14	218.41	8.143			
12,900.00	7,950.00	11,676.88	7,889.84	121.11	103.37	88.06	-1,317.21	-3,769.47	1,772.60	1,549.74	222.86	7.954			
13,000.00	7,950.00	11,739.00	7,890.80	123.65	104.97	88.09	-1,319.80	-3,831.53	1,768.51	1,541.93	226.58	7.805			
13,100.00	7,950.00	11,794.79	7,891.66	126.20	106.40	88.12	-1,320.83	-3,887.30	1,766.74	1,536.79	229.95	7.683			
13,119.45	7,950.00	11,805.55	7,891.83	126.69	106.68	88.12	-1,320.87	-3,898.06	1,766.69	1,536.10	230.59	7.662			
13,200.00	7,950.00	11,833.00	7,892.24	128.75	107.38	88.14	-1,320.72	-3,925.50	1,767.65	1,535.25	232.40	7.606			
13,300.00	7,950.00	11,898.20	7,893.21	131.31	109.05	88.17	-1,318.75	-3,990.67	1,771.04	1,535.11	235.94	7.506			
13,400.00	7,950.00	11,957.36	7,894.06	133.88	110.57	88.20	-1,315.02	-4,049.70	1,777.30	1,538.20	239.10	7.433			
13,500.00	7,950.00	12,075.20	7,895.71	136.45	113.58	88.26	-1,306.08	-4,167.18	1,785.13	1,539.92	245.21	7.280			
13,600.00	7,950.00	12,225.45	7,897.72	139.02	117.46	88.33	-1,299.93	-4,317.29	1,788.97	1,536.09	252.88	7.074			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL SURVEY	Offset Site Error:	0.00 usft
Survey Program:													94-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
13,700.00	7,950.00	12,305.00	7,898.81	141.60	119.51	88.37	-1,296.77	-4,396.77	1,793.01	1,535.88	257.13	6.973			
13,800.00	7,950.00	12,399.99	7,900.11	144.19	121.97	88.42	-1,292.33	-4,491.65	1,797.76	1,535.64	262.12	6.859			
13,900.00	7,950.00	12,482.03	7,901.25	146.77	124.10	88.46	-1,288.03	-4,573.56	1,803.07	1,536.61	266.46	6.767			
14,000.00	7,950.00	12,798.65	7,905.66	149.36	132.35	88.59	-1,290.25	-4,889.81	1,801.52	1,520.61	280.90	6.413			
14,100.00	7,950.00	12,875.60	7,906.63	151.96	134.36	88.62	-1,294.55	-4,966.64	1,796.01	1,510.67	285.33	6.294			
14,200.00	7,950.00	13,001.80	7,908.25	154.56	137.66	88.67	-1,301.85	-5,092.61	1,790.30	1,498.80	291.50	6.142			
14,300.00	7,950.00	13,098.49	7,909.53	157.16	140.20	88.71	-1,308.33	-5,189.07	1,783.69	1,487.06	296.63	6.013			
14,400.00	7,950.00	13,173.62	7,910.63	159.76	142.17	88.74	-1,312.53	-5,264.08	1,778.19	1,477.18	301.01	5.907			
14,500.00	7,950.00	13,250.00	7,911.78	162.37	144.17	88.77	-1,315.79	-5,340.38	1,774.01	1,468.61	305.39	5.809			
14,600.00	7,950.00	13,327.35	7,912.91	164.98	146.20	88.81	-1,318.10	-5,417.69	1,771.12	1,461.35	309.77	5.717			
14,700.00	7,950.00	13,405.00	7,914.01	167.59	148.25	88.84	-1,319.40	-5,495.32	1,769.54	1,455.42	314.12	5.633			
14,800.00	7,950.00	13,488.55	7,915.25	170.20	150.45	88.88	-1,319.82	-5,578.86	1,769.11	1,450.42	318.69	5.551			
14,804.44	7,950.00	13,492.46	7,915.31	170.32	150.55	88.89	-1,319.82	-5,582.77	1,769.11	1,450.21	318.90	5.547			
14,900.00	7,950.00	13,569.39	7,916.43	172.82	152.57	88.92	-1,319.58	-5,659.69	1,769.52	1,446.41	323.12	5.476			
15,000.00	7,950.00	13,646.21	7,917.54	175.44	154.60	88.96	-1,318.26	-5,736.49	1,771.30	1,443.99	327.32	5.412			
15,100.00	7,950.00	13,738.35	7,918.81	178.06	157.02	89.00	-1,315.90	-5,828.59	1,773.96	1,441.73	332.23	5.340			
15,200.00	7,950.00	13,867.43	7,920.45	180.68	160.42	89.06	-1,313.09	-5,957.63	1,776.31	1,437.40	338.91	5.241			
15,300.00	7,950.00	14,055.09	7,922.13	183.31	165.38	89.11	-1,315.99	-6,145.23	1,774.75	1,426.87	347.88	5.102			
15,400.00	7,950.00	14,192.20	7,923.01	185.93	169.00	89.13	-1,322.79	-6,282.17	1,769.88	1,415.40	354.48	4.993			
15,500.00	7,950.00	14,275.86	7,923.61	188.56	171.21	89.15	-1,327.44	-6,365.70	1,764.44	1,405.23	359.20	4.912			
15,600.00	7,950.00	14,352.30	7,924.28	191.19	173.23	89.17	-1,330.83	-6,442.06	1,760.12	1,396.48	363.64	4.840			
15,700.00	7,950.00	14,432.40	7,924.95	193.82	175.35	89.19	-1,333.30	-6,522.12	1,757.12	1,388.95	368.17	4.773			
15,800.00	7,950.00	14,512.09	7,925.66	196.46	177.46	89.22	-1,334.97	-6,601.79	1,755.15	1,382.51	372.63	4.710			
15,900.00	7,950.00	14,594.55	7,926.40	199.09	179.64	89.24	-1,335.59	-6,684.24	1,754.47	1,377.28	377.18	4.651			
16,000.00	7,950.00	14,723.01	7,927.29	201.73	183.05	89.27	-1,336.86	-6,812.69	1,753.67	1,369.96	383.71	4.570			
16,100.00	7,950.00	14,818.83	7,927.62	204.37	185.59	89.28	-1,339.17	-6,908.49	1,751.39	1,362.55	388.84	4.504			
16,189.12	7,950.00	14,877.77	7,927.80	206.72	187.15	89.28	-1,339.86	-6,967.42	1,750.51	1,358.24	392.27	4.463			
16,200.00	7,950.00	14,883.81	7,927.82	207.01	187.31	89.28	-1,339.86	-6,973.46	1,750.52	1,357.89	392.63	4.458			
16,300.00	7,950.00	14,948.00	7,928.02	209.65	189.01	89.29	-1,338.81	-7,037.64	1,752.11	1,355.89	396.22	4.422			
16,400.00	7,950.00	15,054.80	7,928.33	212.29	191.85	89.30	-1,336.18	-7,144.40	1,754.72	1,352.84	401.88	4.366			
16,500.00	7,950.00	15,163.01	7,928.61	214.93	194.72	89.31	-1,334.20	-7,252.59	1,756.68	1,349.08	407.60	4.310			
16,600.00	7,950.00	15,291.88	7,929.08	217.58	198.14	89.33	-1,333.78	-7,381.46	1,757.06	1,342.80	414.27	4.241			
16,700.00	7,950.00	15,433.35	7,929.55	220.22	201.90	89.34	-1,335.61	-7,522.91	1,755.96	1,334.62	421.33	4.168			
16,800.00	7,950.00	15,555.88	7,930.04	222.87	205.16	89.36	-1,339.87	-7,645.36	1,752.55	1,325.05	427.50	4.100			
16,900.00	7,950.00	15,639.53	7,930.22	225.52	207.38	89.36	-1,343.04	-7,728.96	1,748.93	1,316.72	432.21	4.047			
17,000.00	7,950.00	15,704.00	7,930.32	228.16	209.09	89.36	-1,344.32	-7,793.41	1,747.06	1,310.99	436.07	4.006			
17,038.43	7,950.00	15,727.32	7,930.37	229.18	209.71	89.37	-1,344.44	-7,816.73	1,746.90	1,309.45	437.44	3.993			
17,100.00	7,950.00	15,765.34	7,930.45	230.81	210.73	89.37	-1,344.23	-7,854.75	1,747.31	1,307.70	439.61	3.975			
17,200.00	7,950.00	15,876.24	7,930.79	233.46	213.68	89.38	-1,342.44	-7,965.63	1,749.11	1,303.65	445.47	3.926			
17,300.00	7,950.00	15,955.61	7,931.18	236.12	215.79	89.39	-1,341.76	-8,045.00	1,750.16	1,300.36	449.80	3.891			
17,400.00	7,950.00	16,031.40	7,931.90	238.77	217.81	89.42	-1,339.78	-8,120.76	1,752.84	1,298.97	453.88	3.862			
17,500.00	7,950.00	17,500.00	7,933.08	241.42	256.94	89.46	-1,336.74	-8,246.68	1,755.36	1,258.93	496.44	3.536			
17,600.00	7,950.00	16,337.61	7,934.80	244.08	225.96	89.51	-1,338.26	-8,426.89	1,754.42	1,284.97	469.45	3.737			
17,700.00	7,950.00	16,478.55	7,936.16	246.73	229.71	89.56	-1,344.35	-8,567.69	1,750.11	1,273.88	476.23	3.675			
17,800.00	7,950.00	16,555.00	7,936.91	249.39	231.74	89.58	-1,348.42	-8,644.03	1,745.07	1,264.32	480.75	3.630			
17,900.00	7,950.00	16,624.48	7,937.62	252.04	233.59	89.60	-1,351.05	-8,713.45	1,741.63	1,256.71	484.93	3.592			
17,978.31	7,950.00	16,667.63	7,938.05	254.12	234.74	89.62	-1,351.53	-8,756.60	1,740.85	1,253.26	487.59	3.570			
18,000.00	7,950.00	16,679.73	7,938.18	254.70	235.07	89.62	-1,351.51	-8,768.69	1,740.91	1,252.61	488.30	3.565			
18,100.00	7,950.00	16,744.00	7,938.83	257.36	236.78	89.64	-1,350.29	-8,832.95	1,742.77	1,250.92	491.85	3.543			
18,200.00	7,950.00	16,819.36	7,939.64	260.02	238.79	89.67	-1,347.55	-8,908.26	1,746.40	1,250.56	495.85	3.522			
18,300.00	7,950.00	16,900.19	7,940.55	262.67	240.94	89.70	-1,344.01	-8,989.00	1,750.91	1,250.83	500.08	3.501			
18,400.00	7,950.00	17,005.72	7,941.63	265.33	243.76	89.74	-1,338.60	-9,094.38	1,756.16	1,250.40	505.76	3.472			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 94-MWD OWSG												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
18,500.00	7,950.00	17,124.74	7,942.94	267.99	246.93	89.78	-1,333.72	-9,213.30	1,760.37	1,248.16	512.21	3.437	
18,600.00	7,950.00	17,214.87	7,943.90	270.66	249.33	89.81	-1,330.22	-9,303.35	1,764.37	1,247.37	517.00	3.413	
18,700.00	7,950.00	17,298.80	7,944.83	273.32	251.57	89.84	-1,326.37	-9,387.19	1,769.07	1,247.65	521.41	3.393	
18,800.00	7,950.00	17,386.81	7,945.81	275.98	253.92	89.87	-1,321.63	-9,475.07	1,774.57	1,248.53	526.04	3.373	
18,847.73	7,950.00	17,447.04	7,946.46	277.25	255.53	89.90	-1,318.31	-9,535.21	1,777.27	1,247.92	529.36	3.357	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FINAL SURVEY	Offset Site Error:	0.00 usft
Survey Program: 2310-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	2,218.00	2,217.98	0.00	0.00	110.08	-347.60	950.65	2,441.04						
100.00	100.00	2,218.00	2,217.98	0.13	0.00	110.08	-347.60	950.65	2,350.40	2,348.33	2.08	1,132.145			
200.00	200.00	2,218.00	2,217.98	0.49	0.00	110.08	-347.60	950.65	2,260.56	2,258.49	2.08	1,089.375			
250.00	250.00	2,218.00	2,217.98	0.67	0.00	110.08	-347.60	950.65	2,215.97	2,213.89	2.08	1,064.856			
300.00	300.00	2,218.00	2,217.98	0.84	0.00	-54.88	-347.60	950.65	2,171.49	2,169.39	2.10	1,035.957			
400.00	399.93	2,218.00	2,217.98	1.19	0.00	-58.12	-347.60	950.65	2,082.58	2,080.44	2.14	971.302			
500.00	499.68	2,218.00	2,217.98	1.54	0.00	-61.45	-347.60	950.65	1,993.84	1,991.62	2.22	899.560			
600.00	599.13	2,218.00	2,217.98	1.92	0.00	-64.83	-347.60	950.65	1,905.40	1,903.09	2.31	824.861			
700.00	698.15	2,218.00	2,217.98	2.32	0.00	-68.22	-347.60	950.65	1,817.44	1,815.01	2.43	748.415			
800.00	796.63	2,218.00	2,217.98	2.74	0.00	-71.59	-347.60	950.65	1,730.12	1,727.54	2.58	671.379			
900.00	894.44	2,218.00	2,217.98	3.20	0.00	-74.88	-347.60	950.65	1,643.67	1,640.91	2.76	594.942			
1,000.00	991.46	2,218.00	2,217.98	3.70	0.00	-78.06	-347.60	950.65	1,558.36	1,555.36	2.99	520.388			
1,100.00	1,087.58	2,218.00	2,217.98	4.24	0.00	-81.09	-347.60	950.65	1,474.48	1,471.20	3.28	449.086			
1,200.00	1,182.68	2,218.00	2,217.98	4.83	0.00	-83.94	-347.60	950.65	1,392.41	1,388.77	3.64	382.397			
1,300.00	1,276.65	2,218.00	2,217.98	5.46	0.00	-86.58	-347.60	950.65	1,312.61	1,308.52	4.08	321.519			
1,400.00	1,369.36	2,218.00	2,217.98	6.14	0.00	-88.99	-347.60	950.65	1,235.60	1,230.98	4.62	267.338			
1,471.15	1,434.50	2,218.00	2,217.98	6.66	0.00	-90.57	-347.60	950.65	1,182.88	1,177.81	5.07	233.165			
1,500.00	1,460.77	2,218.00	2,217.98	6.87	0.00	-90.57	-347.60	950.65	1,162.06	1,156.79	5.27	220.403			
1,600.00	1,551.82	2,218.00	2,217.98	7.62	0.00	-90.57	-347.60	950.65	1,092.74	1,086.70	6.03	181.110			
1,700.00	1,642.88	2,218.00	2,217.98	8.38	0.00	-90.57	-347.60	950.65	1,028.47	1,021.57	6.90	149.075			
1,800.00	1,733.93	2,218.00	2,217.98	9.15	0.00	-90.57	-347.60	950.65	970.27	962.41	7.86	123.423			
1,900.00	1,824.98	2,218.00	2,217.98	9.93	0.00	-90.57	-347.60	950.65	919.30	910.39	8.90	103.251			
2,000.00	1,916.03	2,218.00	2,217.98	10.71	0.00	-90.57	-347.60	950.65	876.80	866.81	10.00	87.722			
2,100.00	2,007.08	2,218.00	2,217.98	11.49	0.00	-90.57	-347.60	950.65	844.08	832.99	11.09	76.105			
2,200.00	2,098.13	2,218.00	2,217.98	12.28	0.00	-90.57	-347.60	950.65	822.28	810.15	12.13	67.776			
2,300.00	2,189.19	2,218.00	2,217.98	13.07	0.00	-90.57	-347.60	950.65	812.29	799.24	13.06	62.211			
2,331.61	2,217.97	2,218.00	2,217.98	13.32	0.00	-90.57	-347.60	950.65	811.68	798.36	13.32	60.954 CC, ES			
2,400.00	2,280.24	2,276.69	2,276.67	13.86	0.11	-92.26	-347.92	950.78	812.44	798.48	13.95	58.227			
2,500.00	2,371.29	2,361.75	2,361.73	14.65	0.35	-94.71	-348.10	951.07	815.50	800.55	14.95	54.546			
2,600.00	2,462.34	2,443.11	2,443.07	15.44	0.63	-97.14	-346.44	951.57	821.68	805.72	15.96	51.478			
2,700.00	2,553.39	2,526.04	2,525.93	16.24	0.93	-99.68	-343.00	952.16	831.02	814.07	16.94	49.049			
2,800.00	2,644.45	2,614.75	2,614.52	17.03	1.24	-102.39	-338.54	952.84	843.08	825.17	17.91	47.064			
2,900.00	2,735.50	2,710.79	2,710.41	17.83	1.59	-105.29	-333.29	952.66	856.91	838.03	18.88	45.389			
3,000.00	2,826.55	2,802.03	2,801.50	18.63	1.92	-108.01	-328.09	951.76	872.51	852.72	19.79	44.096			
3,100.00	2,917.60	2,891.43	2,890.74	19.43	2.25	-110.61	-322.87	950.55	890.10	869.46	20.65	43.109			
3,200.00	3,008.65	2,979.38	2,978.53	20.23	2.57	-113.07	-317.80	949.40	909.75	888.28	21.47	42.378			
3,300.00	3,099.70	3,067.46	3,066.46	21.03	2.90	-115.45	-312.73	948.31	931.35	909.10	22.25	41.849			
3,400.00	3,190.76	3,154.30	3,153.15	21.83	3.22	-117.70	-307.68	947.31	954.84	931.83	23.01	41.504			
3,500.00	3,281.81	3,240.60	3,239.32	22.63	3.53	-119.80	-303.07	947.06	980.16	956.43	23.73	41.302			
3,600.00	3,372.86	3,330.39	3,329.02	23.43	3.86	-121.81	-299.07	947.90	1,006.99	982.53	24.46	41.165			
3,700.00	3,463.91	3,422.99	3,421.54	24.23	4.20	-123.77	-295.31	948.96	1,034.92	1,009.73	25.19	41.077			
3,800.00	3,554.96	3,515.07	3,513.55	25.03	4.53	-125.63	-291.79	949.82	1,063.71	1,037.80	25.91	41.055 SF			
3,900.00	3,646.01	3,606.16	3,604.56	25.83	4.86	-127.41	-288.10	950.08	1,093.39	1,066.79	26.60	41.103			
4,000.00	3,737.07	3,699.41	3,697.75	26.63	5.20	-129.14	-284.53	950.30	1,123.89	1,096.60	27.30	41.174			
4,100.00	3,828.12	3,790.86	3,789.14	27.43	5.53	-130.74	-281.45	950.65	1,155.02	1,127.04	27.97	41.288			
4,200.00	3,919.17	3,879.01	3,877.24	28.24	5.84	-132.20	-278.49	951.02	1,186.97	1,158.35	28.63	41.465			
4,300.00	4,010.22	3,965.48	3,963.66	29.04	6.16	-133.57	-275.42	951.45	1,219.88	1,190.62	29.26	41.691			
4,400.00	4,101.27	4,054.91	4,053.01	29.84	6.48	-134.96	-271.76	951.38	1,253.71	1,223.81	29.90	41.926			
4,500.00	4,192.33	4,150.16	4,148.19	30.65	6.83	-136.35	-268.14	951.24	1,287.96	1,257.38	30.58	42.117			
4,600.00	4,283.38	4,238.06	4,236.04	31.45	7.14	-137.57	-265.19	951.20	1,322.50	1,291.29	31.21	42.374			
4,700.00	4,374.43	4,320.09	4,318.01	32.25	7.44	-138.66	-261.87	951.19	1,358.17	1,326.37	31.80	42.714			
4,800.00	4,465.48	4,416.09	4,413.93	33.05	7.79	-139.87	-258.08	951.38	1,394.37	1,361.89	32.48	42.931			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FINAL SURVEY	Offset Site Error:	0.00 usft
Survey Program: 2310-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,510.12	4,507.91	33.86	8.13	-140.97	-255.14	951.76	1,430.41	1,397.26	33.15	43.147			
5,000.00	4,647.58	4,585.09	4,582.83	34.66	8.40	-141.83	-252.26	951.98	1,467.46	1,433.77	33.69	43.556			
5,100.00	4,738.64	4,674.26	4,671.91	35.47	8.72	-142.81	-248.38	952.13	1,505.33	1,471.01	34.33	43.853			
5,200.00	4,829.69	4,763.09	4,760.65	36.27	9.05	-143.75	-244.43	952.08	1,543.61	1,508.65	34.96	44.154			
5,300.00	4,920.74	4,860.51	4,857.98	37.07	9.40	-144.73	-240.31	951.93	1,582.05	1,546.39	35.65	44.372			
5,400.00	5,011.79	4,959.74	4,957.15	37.88	9.76	-145.67	-236.75	951.97	1,620.31	1,583.95	36.37	44.555			
5,500.00	5,102.84	5,065.17	5,062.54	38.68	10.14	-146.61	-233.88	952.23	1,658.19	1,621.06	37.13	44.663			
5,600.00	5,193.89	5,136.47	5,133.81	39.48	10.40	-147.22	-231.73	952.33	1,696.53	1,658.88	37.65	45.063			
5,700.00	5,284.95	5,251.63	5,248.92	40.29	10.81	-148.17	-228.47	952.14	1,734.98	1,696.50	38.48	45.090			
5,800.00	5,376.00	5,328.77	5,326.04	41.09	11.09	-148.79	-226.50	951.80	1,773.33	1,734.29	39.04	45.423			
5,900.00	5,467.05	5,405.53	5,402.76	41.90	11.36	-149.39	-224.05	951.28	1,812.47	1,772.87	39.60	45.772			
6,000.00	5,558.10	5,466.40	5,463.57	42.70	11.59	-149.85	-221.51	950.83	1,852.76	1,812.72	40.04	46.276			
6,100.00	5,649.15	5,523.00	5,520.06	43.51	11.79	-150.27	-218.09	950.73	1,894.88	1,854.44	40.44	46.859			
6,200.00	5,740.21	5,584.74	5,581.63	44.31	12.02	-150.71	-213.46	950.95	1,938.57	1,897.69	40.88	47.426			
6,300.00	5,831.26	5,656.34	5,652.96	45.11	12.29	-151.20	-207.36	951.49	1,983.39	1,942.00	41.39	47.916			
6,400.00	5,922.31	5,755.35	5,751.59	45.92	12.66	-151.84	-198.59	952.14	2,028.73	1,986.60	42.14	48.146			
6,500.00	6,013.36	5,897.55	5,893.43	46.72	13.19	-152.77	-188.56	951.15	2,072.43	2,029.22	43.21	47.962			
6,600.00	6,104.41	6,000.00	6,066.49	47.53	15.66	-153.83	-182.64	948.59	2,112.67	2,066.34	46.33	45.600			
6,700.00	6,195.46	6,202.58	6,198.30	48.33	14.26	-154.57	-182.25	947.13	2,150.47	2,105.06	45.41	47.356			
6,800.00	6,286.52	6,294.69	6,290.40	49.14	14.56	-155.05	-182.48	946.31	2,188.14	2,142.06	46.08	47.484			
6,900.00	6,377.57	6,376.55	6,372.27	49.94	14.84	-155.45	-182.56	946.13	2,226.16	2,179.47	46.69	47.676			
7,000.00	6,468.62	6,455.41	6,451.13	50.75	15.11	-155.82	-182.31	946.47	2,264.72	2,217.43	47.29	47.885			
7,100.00	6,559.67	6,539.73	6,535.44	51.55	15.40	-156.18	-181.72	947.30	2,303.78	2,255.84	47.94	48.055			
7,200.00	6,650.72	6,667.15	6,662.84	52.36	15.83	-156.71	-181.62	948.53	2,342.37	2,293.49	48.88	47.923			
7,300.00	6,741.77	6,737.16	6,732.85	53.16	16.07	-157.00	-181.80	948.88	2,380.71	2,331.29	49.42	48.176			
7,400.00	6,832.83	6,802.52	6,798.21	53.97	16.29	-157.26	-181.35	949.41	2,420.01	2,370.08	49.93	48.468			
7,500.00	6,923.88	6,893.53	6,889.20	54.77	16.62	-157.61	-179.91	950.39	2,460.21	2,409.58	50.63	48.589			
7,600.00	7,014.93	7,008.44	7,004.11	55.58	17.02	-158.05	-179.23	951.04	2,499.53	2,448.02	51.50	48.531			
7,700.00	7,105.98	7,105.23	7,100.90	56.38	17.35	-158.39	-179.11	951.78	2,538.54	2,486.29	52.24	48.593			
7,800.00	7,197.03	7,198.69	7,194.35	57.19	17.67	-158.71	-179.15	952.73	2,577.48	2,524.52	52.96	48.672			
7,900.00	7,288.09	7,364.85	7,357.42	57.99	18.22	-158.68	-183.80	978.95	2,614.18	2,559.84	54.34	48.106			
7,982.08	7,362.82	7,389.89	7,381.22	58.65	18.30	-158.58	-184.67	986.71	2,644.76	2,590.12	54.64	48.406			
8,000.00	7,379.16	7,394.97	7,386.03	58.79	18.32	-163.18	-184.79	988.34	2,651.66	2,596.96	54.70	48.479			
8,050.00	7,424.95	7,409.00	7,399.29	59.18	18.36	-176.58	-185.00	992.92	2,671.55	2,616.69	54.86	48.702			
8,100.00	7,470.74	7,428.97	7,418.05	59.53	18.43	170.01	-185.14	999.75	2,692.19	2,637.12	55.07	48.889			
8,150.00	7,516.17	7,461.42	7,448.20	59.84	18.53	157.62	-185.17	1,011.76	2,713.34	2,657.94	55.41	48.973			
8,200.00	7,560.91	7,503.00	7,486.31	60.13	18.68	146.86	-185.43	1,028.38	2,734.57	2,678.72	55.85	48.965			
8,250.00	7,604.61	7,523.39	7,504.76	60.38	18.75	137.39	-185.58	1,037.05	2,756.01	2,699.93	56.08	49.145			
8,300.00	7,646.94	7,535.00	7,515.18	60.60	18.79	129.20	-185.61	1,042.18	2,777.73	2,721.51	56.22	49.408			
8,350.00	7,687.58	7,535.00	7,515.18	60.78	18.79	121.98	-185.61	1,042.18	2,799.67	2,743.43	56.24	49.783			
8,400.00	7,726.22	7,550.31	7,528.78	60.94	18.85	116.04	-185.53	1,049.20	2,821.57	2,765.13	56.44	49.992			
8,450.00	7,762.57	7,555.32	7,533.20	61.07	18.87	110.68	-185.48	1,051.57	2,843.44	2,786.90	56.54	50.292			
8,500.00	7,796.34	7,566.00	7,542.55	61.18	18.91	106.10	-185.29	1,056.72	2,865.12	2,808.40	56.72	50.511			
8,550.00	7,827.28	7,566.00	7,542.55	61.26	18.91	101.84	-185.29	1,056.72	2,886.38	2,829.58	56.80	50.813			
8,600.00	7,855.16	7,566.00	7,542.55	61.31	18.91	98.06	-185.29	1,056.72	2,907.16	2,850.24	56.91	51.080			
8,650.00	7,879.76	7,566.00	7,542.55	61.35	18.91	94.71	-185.29	1,056.72	2,927.29	2,870.23	57.06	51.305			
8,700.00	7,900.90	7,566.00	7,542.55	61.37	18.91	91.74	-185.29	1,056.72	2,946.64	2,889.40	57.24	51.482			
8,750.00	7,918.42	7,566.00	7,542.55	61.37	18.91	89.14	-185.29	1,056.72	2,965.08	2,907.63	57.46	51.605			
8,800.00	7,932.18	7,566.00	7,542.55	61.35	18.91	86.89	-185.29	1,056.72	2,982.50	2,924.78	57.72	51.671			
8,850.00	7,942.07	7,554.23	7,532.24	61.31	18.87	84.74	-185.49	1,051.05	2,998.67	2,940.79	57.88	51.806			
8,900.00	7,948.03	7,549.91	7,528.43	61.26	18.85	83.06	-185.54	1,049.02	3,013.60	2,955.42	58.18	51.799			
8,949.68	7,950.00	7,535.00	7,515.18	61.20	18.79	81.52	-185.61	1,042.18	3,027.13	2,968.74	58.38	51.848			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FINAL SURVEY	Offset Site Error:	0.00 usft
Survey Program: 2310-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,000.00	7,950.00	7,535.00	7,515.18	61.14	18.79	81.52	-185.61	1,042.18	3,040.34	2,981.54	58.81	51.701			
9,100.00	7,950.00	7,535.00	7,515.18	61.03	18.79	81.52	-185.61	1,042.18	3,068.88	3,009.18	59.71	51.400			
9,200.00	7,950.00	7,513.32	7,495.68	60.93	18.71	81.15	-185.53	1,032.71	3,100.15	3,039.72	60.43	51.301			
9,300.00	7,950.00	7,496.66	7,480.53	60.85	18.65	80.85	-185.37	1,025.77	3,134.14	3,072.86	61.27	51.149			
9,400.00	7,950.00	7,472.00	7,457.95	60.80	18.57	80.42	-185.21	1,015.87	3,170.60	3,108.52	62.08	51.071			
9,500.00	7,950.00	7,446.71	7,434.58	60.77	18.49	79.97	-185.15	1,006.20	3,209.46	3,146.53	62.93	51.003			
9,600.00	7,950.00	7,440.00	7,428.34	60.76	18.46	79.85	-185.15	1,003.72	3,250.75	3,186.77	63.99	50.803			
9,700.00	7,950.00	7,424.28	7,413.66	60.79	18.41	79.57	-185.12	998.11	3,294.41	3,229.44	64.97	50.706			
9,800.00	7,950.00	7,409.00	7,399.29	60.86	18.36	79.30	-185.00	992.92	3,340.44	3,274.48	65.96	50.641			
9,900.00	7,950.00	7,409.00	7,399.29	60.99	18.36	79.30	-185.00	992.92	3,388.67	3,321.57	67.09	50.507			
10,000.00	7,950.00	7,409.00	7,399.29	61.21	18.36	79.30	-185.00	992.92	3,439.12	3,370.92	68.21	50.422			
10,100.00	7,950.00	7,393.27	7,384.41	61.56	18.31	79.01	-184.75	987.79	3,491.55	3,422.38	69.17	50.480			
10,200.00	7,950.00	7,377.00	7,368.99	62.08	18.26	78.72	-184.28	982.67	3,546.07	3,475.97	70.11	50.582			
10,300.00	7,950.00	7,377.00	7,368.99	62.87	18.26	78.72	-184.28	982.67	3,602.37	3,531.22	71.15	50.628			
10,400.00	7,950.00	7,377.00	7,368.99	63.95	18.26	78.72	-184.28	982.67	3,660.54	3,588.37	72.17	50.721			
10,500.00	7,950.00	7,377.00	7,368.99	65.35	18.26	78.72	-184.28	982.67	3,720.49	3,647.33	73.15	50.858			
10,600.00	7,950.00	7,360.01	7,352.81	67.00	18.21	78.42	-183.58	977.50	3,781.95	3,707.96	73.99	51.115			
10,700.00	7,950.00	7,346.00	7,339.44	68.85	18.16	78.17	-182.87	973.40	3,845.08	3,770.27	74.82	51.394			
10,800.00	7,950.00	7,346.00	7,339.44	70.83	18.16	78.17	-182.87	973.40	3,909.64	3,833.93	75.71	51.641			
10,900.00	7,950.00	7,346.00	7,339.44	72.91	18.16	78.17	-182.87	973.40	3,975.66	3,899.10	76.57	51.925			
11,000.00	7,950.00	7,333.07	7,327.04	75.07	18.12	77.93	-182.18	969.78	4,043.00	3,965.69	77.31	52.294			
11,100.00	7,950.00	7,326.27	7,320.50	77.28	18.09	77.81	-181.83	967.97	4,111.64	4,033.57	78.07	52.669			
11,200.00	7,950.00	7,314.00	7,308.64	79.54	18.05	77.59	-181.26	964.86	4,181.51	4,102.76	78.76	53.093			
11,300.00	7,950.00	7,314.00	7,308.64	81.83	18.05	77.59	-181.26	964.86	4,252.52	4,173.03	79.49	53.497			
11,400.00	7,950.00	7,314.00	7,308.64	84.16	18.05	77.59	-181.26	964.86	4,324.68	4,244.49	80.19	53.927			
11,500.00	7,950.00	7,314.00	7,308.64	86.51	18.05	77.59	-181.26	964.86	4,397.93	4,317.06	80.87	54.384			
11,600.00	7,950.00	7,314.00	7,308.64	88.89	18.05	77.59	-181.26	964.86	4,472.21	4,390.70	81.51	54.865			
11,700.00	7,950.00	7,314.00	7,308.64	91.29	18.05	77.59	-181.26	964.86	4,547.48	4,465.35	82.13	55.369			
11,800.00	7,950.00	7,314.00	7,308.64	93.71	18.05	77.59	-181.26	964.86	4,623.69	4,540.97	82.72	55.895			
11,900.00	7,950.00	7,314.00	7,308.64	96.14	18.05	77.59	-181.26	964.86	4,700.79	4,617.50	83.29	56.441			
12,000.00	7,950.00	7,314.00	7,308.64	98.59	18.05	77.59	-181.26	964.86	4,778.73	4,694.90	83.83	57.006			
12,100.00	7,950.00	7,314.00	7,308.64	101.05	18.05	77.59	-181.26	964.86	4,857.49	4,773.14	84.35	57.589			
12,200.00	7,950.00	7,314.00	7,308.64	103.52	18.05	77.59	-181.26	964.86	4,937.01	4,852.17	84.84	58.189			
12,300.00	7,950.00	7,314.00	7,308.64	106.01	18.05	77.59	-181.26	964.86	5,017.27	4,931.95	85.32	58.805			
12,400.00	7,950.00	7,314.00	7,308.64	108.50	18.05	77.59	-181.26	964.86	5,098.23	5,012.45	85.78	59.436			
12,500.00	7,950.00	7,314.00	7,308.64	111.01	18.05	77.59	-181.26	964.86	5,179.85	5,093.63	86.21	60.082			
12,600.00	7,950.00	7,314.00	7,308.64	113.52	18.05	77.59	-181.26	964.86	5,262.10	5,175.47	86.63	60.741			
12,700.00	7,950.00	7,314.00	7,308.64	116.04	18.05	77.59	-181.26	964.86	5,344.96	5,257.93	87.03	61.412			
12,800.00	7,950.00	7,314.00	7,308.64	118.57	18.05	77.59	-181.26	964.86	5,428.40	5,340.98	87.42	62.096			
12,900.00	7,950.00	7,314.00	7,308.64	121.11	18.05	77.59	-181.26	964.86	5,512.39	5,424.60	87.79	62.791			
13,000.00	7,950.00	7,314.00	7,308.64	123.65	18.05	77.59	-181.26	964.86	5,596.90	5,508.76	88.15	63.496			
13,100.00	7,950.00	7,314.00	7,308.64	126.20	18.05	77.59	-181.26	964.86	5,681.92	5,593.43	88.49	64.212			
13,200.00	7,950.00	7,314.00	7,308.64	128.75	18.05	77.59	-181.26	964.86	5,767.42	5,678.60	88.81	64.938			
13,300.00	7,950.00	7,314.00	7,308.64	131.31	18.05	77.59	-181.26	964.86	5,853.38	5,764.25	89.13	65.672			
13,400.00	7,950.00	7,314.00	7,308.64	133.88	18.05	77.59	-181.26	964.86	5,939.78	5,850.34	89.43	66.415			
13,500.00	7,950.00	7,314.00	7,308.64	136.45	18.05	77.59	-181.26	964.86	6,026.59	5,936.87	89.73	67.167			
13,600.00	7,950.00	7,272.10	7,267.58	139.02	17.91	76.82	-179.81	956.77	6,111.87	6,022.00	89.87	68.007			
13,700.00	7,950.00	7,271.09	7,266.58	141.60	17.91	76.81	-179.78	956.63	6,199.38	6,109.24	90.14	68.773			
13,800.00	7,950.00	7,270.12	7,265.62	144.19	17.91	76.79	-179.76	956.50	6,287.25	6,196.85	90.40	69.547			
13,900.00	7,950.00	7,269.18	7,264.68	146.77	17.90	76.77	-179.74	956.38	6,375.48	6,284.83	90.65	70.327			
14,000.00	7,950.00	7,268.27	7,263.79	149.36	17.90	76.75	-179.72	956.26	6,464.05	6,373.15	90.90	71.114			
14,100.00	7,950.00	7,267.39	7,262.92	151.96	17.90	76.74	-179.70	956.15	6,552.95	6,461.82	91.13	71.907			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FINAL SURVEY	Offset Site Error:	0.00 usft
Survey Program: 2310-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,200.00	7,950.00	7,266.55	7,262.08	154.56	17.90	76.72	-179.68	956.04	6,642.16	6,550.80	91.36	72.705			
14,300.00	7,950.00	7,265.73	7,261.27	157.16	17.89	76.71	-179.66	955.94	6,731.67	6,640.09	91.58	73.508			
14,400.00	7,950.00	7,223.00	7,218.66	159.76	17.75	75.92	-179.17	953.03	6,823.48	6,731.85	91.63	74.465			
14,500.00	7,950.00	7,223.00	7,218.66	162.37	17.75	75.92	-179.17	953.03	6,913.50	6,821.65	91.84	75.275			
14,600.00	7,950.00	7,223.00	7,218.66	164.98	17.75	75.92	-179.17	953.03	7,003.78	6,911.74	92.05	76.090			
14,700.00	7,950.00	7,223.00	7,218.66	167.59	17.75	75.92	-179.17	953.03	7,094.33	7,002.09	92.24	76.910			
14,800.00	7,950.00	7,223.00	7,218.66	170.20	17.75	75.92	-179.17	953.03	7,185.13	7,092.69	92.43	77.734			
14,900.00	7,950.00	7,223.00	7,218.66	172.82	17.75	75.92	-179.17	953.03	7,276.17	7,183.55	92.62	78.562			
15,000.00	7,950.00	7,223.00	7,218.66	175.44	17.75	75.92	-179.17	953.03	7,367.44	7,274.64	92.80	79.394			
15,100.00	7,950.00	7,223.00	7,218.66	178.06	17.75	75.92	-179.17	953.03	7,458.93	7,365.96	92.97	80.229			
15,200.00	7,950.00	7,223.00	7,218.66	180.68	17.75	75.92	-179.17	953.03	7,550.64	7,457.50	93.14	81.068			
15,300.00	7,950.00	7,223.00	7,218.66	183.31	17.75	75.92	-179.17	953.03	7,642.56	7,549.26	93.30	81.911			
15,400.00	7,950.00	7,223.00	7,218.66	185.93	17.75	75.92	-179.17	953.03	7,734.68	7,641.22	93.46	82.757			
15,500.00	7,950.00	7,223.00	7,218.66	188.56	17.75	75.92	-179.17	953.03	7,826.99	7,733.37	93.62	83.606			
15,600.00	7,950.00	7,223.00	7,218.66	191.19	17.75	75.92	-179.17	953.03	7,919.49	7,825.72	93.77	84.457			
15,700.00	7,950.00	7,223.00	7,218.66	193.82	17.75	75.92	-179.17	953.03	8,012.17	7,918.25	93.92	85.312			
15,800.00	7,950.00	7,223.00	7,218.66	196.46	17.75	75.92	-179.17	953.03	8,105.02	8,010.97	94.06	86.169			
15,900.00	7,950.00	7,223.00	7,218.66	199.09	17.75	75.92	-179.17	953.03	8,198.05	8,103.85	94.20	87.029			
16,000.00	7,950.00	7,223.00	7,218.66	201.73	17.75	75.92	-179.17	953.03	8,291.23	8,196.89	94.34	87.891			
16,100.00	7,950.00	7,223.00	7,218.66	204.37	17.75	75.92	-179.17	953.03	8,384.57	8,290.10	94.47	88.755			
16,200.00	7,950.00	7,223.00	7,218.66	207.01	17.75	75.92	-179.17	953.03	8,478.06	8,383.47	94.60	89.621			
16,300.00	7,950.00	7,223.00	7,218.66	209.65	17.75	75.92	-179.17	953.03	8,571.70	8,476.98	94.73	90.490			
16,400.00	7,950.00	7,223.00	7,218.66	212.29	17.75	75.92	-179.17	953.03	8,665.49	8,570.64	94.85	91.360			
16,500.00	7,950.00	7,223.00	7,218.66	214.93	17.75	75.92	-179.17	953.03	8,759.41	8,664.44	94.97	92.233			
16,600.00	7,950.00	7,223.00	7,218.66	217.58	17.75	75.92	-179.17	953.03	8,853.46	8,758.37	95.09	93.107			
16,700.00	7,950.00	7,223.00	7,218.66	220.22	17.75	75.92	-179.17	953.03	8,947.64	8,852.43	95.21	93.982			
16,800.00	7,950.00	7,223.00	7,218.66	222.87	17.75	75.92	-179.17	953.03	9,041.95	8,946.63	95.32	94.859			
16,900.00	7,950.00	7,223.00	7,218.66	225.52	17.75	75.92	-179.17	953.03	9,136.37	9,040.94	95.43	95.738			
17,000.00	7,950.00	7,223.00	7,218.66	228.16	17.75	75.92	-179.17	953.03	9,230.92	9,135.38	95.54	96.618			
17,100.00	7,950.00	7,223.00	7,218.66	230.81	17.75	75.92	-179.17	953.03	9,325.58	9,229.93	95.65	97.500			
17,200.00	7,950.00	7,223.00	7,218.66	233.46	17.75	75.92	-179.17	953.03	9,420.35	9,324.60	95.75	98.382			
17,300.00	7,950.00	7,223.00	7,218.66	236.12	17.75	75.92	-179.17	953.03	9,515.22	9,419.37	95.86	99.266			
17,400.00	7,950.00	7,223.00	7,218.66	238.77	17.75	75.92	-179.17	953.03	9,610.20	9,514.25	95.96	100.151			
17,500.00	7,950.00	7,223.00	7,218.66	241.42	17.75	75.92	-179.17	953.03	9,705.29	9,609.23	96.06	101.037			
17,600.00	7,950.00	7,223.00	7,218.66	244.08	17.75	75.92	-179.17	953.03	9,800.46	9,704.31	96.16	101.923			
17,700.00	7,950.00	7,223.00	7,218.66	246.73	17.75	75.92	-179.17	953.03	9,895.74	9,799.49	96.25	102.811			
17,800.00	7,950.00	7,223.00	7,218.66	249.39	17.75	75.92	-179.17	953.03	9,991.11	9,894.76	96.35	103.700			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	5.70	5.70	0.00	0.01	-0.11	300.15	-0.56	300.15						
100.00	100.00	105.70	105.70	0.13	0.15	-0.11	300.15	-0.56	300.15	299.86	0.29	1,037.561			
200.00	200.00	205.70	205.70	0.49	0.51	-0.11	300.15	-0.56	300.15	299.15	1.01	298.294			
206.19	206.19	211.89	211.89	0.52	0.54	-0.11	300.15	-0.56	300.15	299.10	1.05	285.696 CC			
250.00	250.00	255.27	255.27	0.67	0.69	-0.11	300.16	-0.56	300.16	298.79	1.36	220.199 ES			
300.00	300.00	301.51	301.51	0.84	0.86	-163.46	300.51	-0.27	300.96	299.26	1.70	176.933			
400.00	399.93	393.73	393.67	1.19	1.19	-163.23	302.95	1.71	306.94	304.56	2.38	129.018			
500.00	499.68	485.23	484.96	1.54	1.52	-162.80	307.64	5.53	318.75	315.67	3.07	103.721			
600.00	599.13	575.53	574.83	1.92	1.86	-162.22	314.48	11.11	336.32	332.55	3.77	89.175			
700.00	698.15	664.22	662.78	2.32	2.20	-161.53	323.33	18.32	359.58	355.11	4.47	80.432			
800.00	796.63	750.89	748.34	2.74	2.56	-160.77	334.02	27.02	388.41	383.24	5.17	75.141			
900.00	894.44	838.27	834.17	3.20	2.93	-159.97	346.70	37.36	422.57	416.69	5.88	71.907			
1,000.00	991.46	930.81	924.96	3.70	3.35	-159.29	360.62	48.69	460.33	453.71	6.62	69.508			
1,100.00	1,087.58	1,022.10	1,014.51	4.24	3.76	-158.78	374.34	59.87	501.12	493.75	7.37	68.028			
1,200.00	1,182.68	1,112.03	1,102.73	4.83	4.17	-158.42	387.87	70.89	544.85	536.73	8.12	67.103			
1,300.00	1,276.65	1,200.48	1,189.50	5.46	4.58	-158.16	401.16	81.72	591.48	582.60	8.88	66.642			
1,400.00	1,369.36	1,287.34	1,274.72	6.14	4.99	-157.98	414.23	92.36	640.95	631.32	9.63	66.533			
1,471.15	1,434.50	1,348.13	1,334.35	6.66	5.27	-157.88	423.37	99.81	677.86	667.68	10.18	66.617			
1,500.00	1,460.77	1,372.60	1,358.36	6.87	5.39	-157.98	427.04	102.80	693.11	682.72	10.40	66.674			
1,600.00	1,551.82	1,457.41	1,441.56	7.62	5.78	-158.29	439.80	113.19	745.99	734.84	11.15	66.933			
1,700.00	1,642.88	1,542.22	1,524.76	8.38	6.18	-158.56	452.55	123.58	798.87	786.97	11.90	67.126			
1,800.00	1,733.93	1,627.04	1,607.97	9.15	6.58	-158.80	465.30	133.97	851.77	839.11	12.66	67.269			
1,900.00	1,824.98	1,711.85	1,691.17	9.93	6.98	-159.01	478.05	144.35	904.68	891.25	13.43	67.377			
2,000.00	1,916.03	1,803.34	1,774.37	10.71	7.42	-159.20	490.81	154.74	957.60	943.37	14.22	67.324			
2,100.00	2,007.08	1,881.48	1,857.57	11.49	7.79	-159.36	503.56	165.13	1,010.52	995.55	14.97	67.516			
2,200.00	2,098.13	1,966.29	1,940.78	12.28	8.19	-159.51	516.31	175.52	1,063.45	1,047.71	15.74	67.559			
2,300.00	2,189.19	2,051.10	2,023.98	13.07	8.59	-159.65	529.06	185.91	1,116.38	1,099.86	16.52	67.589			
2,400.00	2,280.24	2,135.92	2,107.18	13.86	8.99	-159.77	541.82	196.29	1,169.32	1,152.02	17.30	67.610			
2,500.00	2,371.29	2,220.73	2,190.39	14.65	9.40	-159.89	554.57	206.68	1,222.26	1,204.18	18.07	67.624			
2,600.00	2,462.34	2,305.54	2,273.59	15.44	9.80	-159.99	567.32	217.07	1,275.20	1,256.35	18.86	67.631			
2,700.00	2,553.39	2,390.35	2,356.79	16.24	10.21	-160.09	580.07	227.46	1,328.15	1,308.51	19.64	67.634			
2,800.00	2,644.45	2,475.17	2,440.00	17.03	10.61	-160.17	592.82	237.85	1,381.10	1,360.68	20.42	67.632			
2,900.00	2,735.50	2,559.98	2,523.20	17.83	11.01	-160.26	605.58	248.23	1,434.05	1,412.85	21.20	67.628			
3,000.00	2,826.55	2,644.79	2,606.40	18.63	11.42	-160.33	618.33	258.62	1,487.00	1,465.01	21.99	67.622			
3,100.00	2,917.60	2,729.61	2,689.60	19.43	11.82	-160.40	631.08	269.01	1,539.96	1,517.18	22.78	67.613			
3,200.00	3,008.65	2,814.42	2,772.81	20.23	12.23	-160.47	643.83	279.40	1,592.91	1,569.35	23.56	67.603			
3,300.00	3,099.70	2,900.77	2,856.01	21.03	12.64	-160.53	656.59	289.79	1,645.87	1,621.52	24.36	67.574			
3,400.00	3,190.76	2,984.05	2,939.21	21.83	13.04	-160.59	669.34	300.17	1,698.83	1,673.69	25.14	67.580			
3,500.00	3,281.81	3,068.86	3,022.42	22.63	13.44	-160.64	682.09	310.56	1,751.79	1,725.87	25.93	67.567			
3,600.00	3,372.86	3,153.67	3,105.62	23.43	13.85	-160.69	694.84	320.95	1,804.75	1,778.04	26.72	67.553			
3,700.00	3,463.91	3,238.49	3,188.82	24.23	14.25	-160.74	707.60	331.34	1,857.72	1,830.21	27.51	67.539			
3,800.00	3,554.96	3,323.30	3,272.03	25.03	14.66	-160.79	720.35	341.72	1,910.68	1,882.38	28.30	67.524			
3,900.00	3,646.01	3,408.11	3,355.23	25.83	15.06	-160.83	733.10	352.11	1,963.64	1,934.56	29.09	67.510			
4,000.00	3,737.07	3,507.07	3,438.43	26.63	15.54	-160.87	745.85	362.50	2,016.61	1,986.67	29.94	67.359			
4,100.00	3,828.12	3,577.74	3,521.63	27.43	15.87	-160.91	758.61	372.89	2,069.57	2,038.90	30.67	67.480			
4,200.00	3,919.17	3,662.55	3,604.84	28.24	16.28	-160.95	771.36	383.28	2,122.54	2,091.08	31.46	67.464			
4,300.00	4,010.22	3,747.37	3,688.04	29.04	16.69	-160.98	784.11	393.66	2,175.51	2,143.25	32.25	67.449			
4,400.00	4,101.27	3,832.18	3,771.24	29.84	17.09	-161.01	796.86	404.05	2,228.47	2,195.43	33.05	67.434			
4,500.00	4,192.33	3,916.99	3,854.45	30.65	17.50	-161.05	809.62	414.44	2,281.44	2,247.60	33.84	67.418			
4,600.00	4,283.38	4,001.81	3,937.65	31.45	17.90	-161.08	822.37	424.83	2,334.41	2,299.78	34.63	67.403			
4,700.00	4,374.43	4,086.62	4,020.85	32.25	18.31	-161.10	835.12	435.22	2,387.38	2,351.95	35.43	67.388			
4,800.00	4,465.48	4,171.43	4,104.06	33.05	18.71	-161.13	847.87	445.60	2,440.35	2,404.13	36.22	67.373			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,256.24	4,187.26	33.86	19.12	-161.16	860.62	455.99	2,493.32	2,456.30	37.02	67.357			
5,000.00	4,647.58	4,341.06	4,270.46	34.66	19.53	-161.18	873.38	466.38	2,546.29	2,508.48	37.81	67.342			
5,100.00	4,738.64	4,425.87	4,353.67	35.47	19.93	-161.21	886.13	476.77	2,599.26	2,560.65	38.61	67.327			
5,200.00	4,829.69	4,510.68	4,436.87	36.27	20.34	-161.23	898.88	487.16	2,652.23	2,612.83	39.40	67.312			
5,300.00	4,920.74	4,604.50	4,520.07	37.07	20.79	-161.25	911.63	497.54	2,705.20	2,664.96	40.24	67.233			
5,400.00	5,011.79	4,680.31	4,603.27	37.88	21.15	-161.28	924.39	507.93	2,758.17	2,717.18	40.99	67.282			
5,500.00	5,102.84	4,765.12	4,686.48	38.68	21.56	-161.30	937.14	518.32	2,811.14	2,769.35	41.79	67.268			
5,600.00	5,193.89	4,849.94	4,769.68	39.48	21.96	-161.32	949.89	528.71	2,864.12	2,821.53	42.59	67.253			
5,700.00	5,284.95	4,934.75	4,852.88	40.29	22.37	-161.34	962.64	539.10	2,917.09	2,873.70	43.38	67.238			
5,800.00	5,376.00	5,019.56	4,936.09	41.09	22.77	-161.36	975.40	549.48	2,970.06	2,925.88	44.18	67.152			
5,900.00	5,467.05	5,104.38	5,019.29	41.90	23.18	-161.37	988.15	559.87	3,023.03	2,978.05	44.98	67.209			
6,000.00	5,558.10	5,189.19	5,102.49	42.70	23.59	-161.39	1,000.90	570.26	3,076.01	3,030.23	45.78	67.195			
6,100.00	5,649.15	5,274.00	5,185.70	43.51	23.99	-161.41	1,013.65	580.65	3,128.98	3,082.40	46.58	67.180			
6,200.00	5,740.21	5,358.82	5,268.90	44.31	24.40	-161.42	1,026.41	591.04	3,181.95	3,134.58	47.37	67.166			
6,300.00	5,831.26	5,443.63	5,352.10	45.11	24.80	-161.44	1,039.16	601.42	3,234.92	3,186.75	48.17	67.152			
6,400.00	5,922.31	5,528.44	5,435.30	45.92	25.21	-161.45	1,051.91	611.81	3,287.90	3,238.93	48.97	67.137			
6,500.00	6,013.36	5,613.26	5,518.51	46.72	25.62	-161.47	1,064.66	622.20	3,340.87	3,291.10	49.77	67.123			
6,600.00	6,104.41	5,701.93	5,601.71	47.53	26.04	-161.48	1,077.41	632.59	3,393.85	3,343.26	50.59	67.087			
6,700.00	6,195.46	5,782.88	5,684.91	48.33	26.43	-161.50	1,090.17	642.98	3,446.82	3,395.45	51.37	67.095			
6,800.00	6,286.52	5,867.69	5,768.12	49.14	26.84	-161.51	1,102.92	653.36	3,499.79	3,447.62	52.17	67.081			
6,900.00	6,377.57	5,952.51	5,851.32	49.94	27.24	-161.52	1,115.67	663.75	3,552.77	3,499.79	52.97	67.067			
7,000.00	6,468.62	6,037.32	5,934.52	50.75	27.65	-161.54	1,128.42	674.14	3,605.74	3,551.97	53.77	67.053			
7,100.00	6,559.67	6,122.13	6,017.73	51.55	28.05	-161.55	1,141.18	684.53	3,658.72	3,604.14	54.58	67.039			
7,200.00	6,650.72	6,206.95	6,100.93	52.36	28.46	-161.56	1,153.93	694.91	3,711.69	3,656.31	55.38	67.025			
7,300.00	6,741.77	6,308.24	6,184.13	53.16	28.95	-161.57	1,166.68	705.30	3,764.67	3,708.42	56.25	66.927			
7,400.00	6,832.83	6,376.57	6,267.33	53.97	29.27	-161.58	1,179.43	715.69	3,817.64	3,760.66	56.98	66.997			
7,500.00	6,923.88	6,461.39	6,350.54	54.77	29.68	-161.59	1,192.19	726.08	3,870.62	3,812.83	57.79	66.983			
7,600.00	7,014.93	6,546.20	6,433.74	55.58	30.08	-161.60	1,204.94	736.47	3,923.59	3,865.00	58.59	66.969			
7,700.00	7,105.98	6,631.01	6,516.94	56.38	30.49	-161.62	1,217.69	746.85	3,976.57	3,917.17	59.39	66.955			
7,800.00	7,197.03	6,715.83	6,600.15	57.19	30.90	-161.63	1,230.44	757.24	4,029.54	3,969.35	60.20	66.941			
7,900.00	7,288.09	6,800.64	6,683.35	57.99	31.30	-161.64	1,243.20	767.63	4,082.52	4,021.52	61.00	66.928			
7,982.08	7,362.82	6,870.25	6,751.64	58.65	31.64	-161.64	1,253.66	776.16	4,126.00	4,064.34	61.66	66.916			
8,000.00	7,379.16	6,885.44	6,766.54	58.79	31.71	-166.64	1,255.95	778.02	4,135.50	4,073.70	61.80	66.915			
8,050.00	7,424.95	6,927.63	6,807.93	59.18	31.91	178.95	1,262.29	783.18	4,162.09	4,099.90	62.19	66.928			
8,100.00	7,470.74	6,969.28	6,848.79	59.53	32.11	164.63	1,268.55	788.29	4,188.62	4,126.07	62.55	66.965			
8,150.00	7,516.17	7,010.08	6,888.81	59.84	32.31	151.32	1,274.69	793.28	4,214.92	4,152.03	62.89	67.023			
8,200.00	7,560.91	7,049.71	6,927.70	60.13	32.50	139.58	1,280.65	798.14	4,240.82	4,177.62	63.20	67.101			
8,250.00	7,604.61	7,087.88	6,965.14	60.38	32.68	129.56	1,286.38	802.81	4,266.17	4,202.68	63.49	67.196			
8,300.00	7,646.94	7,124.29	7,000.86	60.60	32.85	121.12	1,291.86	807.27	4,290.83	4,227.08	63.75	67.305			
8,350.00	7,687.58	7,158.67	7,034.58	60.78	33.02	114.03	1,297.03	811.48	4,314.68	4,250.69	63.99	67.426			
8,400.00	7,726.22	7,209.25	7,066.05	60.94	33.26	108.07	1,301.85	815.41	4,337.60	4,273.31	64.29	67.471			
8,450.00	7,762.57	7,220.29	7,095.04	61.07	33.31	103.02	1,306.29	819.03	4,359.49	4,295.08	64.41	67.683			
8,500.00	7,796.34	7,247.07	7,121.31	61.18	33.44	98.73	1,310.32	822.31	4,380.24	4,315.65	64.59	67.811			
8,550.00	7,827.28	7,270.88	7,144.66	61.26	33.56	95.07	1,313.90	825.23	4,399.78	4,335.01	64.77	67.931			
8,600.00	7,855.16	7,291.54	7,164.93	61.31	33.66	91.94	1,317.01	827.76	4,418.01	4,353.07	64.94	68.037			
8,650.00	7,879.76	7,308.90	7,181.96	61.35	33.74	89.27	1,319.62	829.88	4,434.86	4,369.76	65.10	68.123			
8,700.00	7,900.90	7,322.81	7,195.61	61.37	33.81	86.99	1,321.71	831.59	4,450.26	4,384.99	65.27	68.183			
8,750.00	7,918.42	7,333.18	7,205.78	61.37	33.85	85.06	1,323.27	832.86	4,464.15	4,398.70	65.45	68.212			
8,800.00	7,932.18	7,339.93	7,212.40	61.35	33.89	83.46	1,324.28	833.68	4,476.44	4,410.81	65.63	68.206			
8,850.00	7,942.07	7,343.01	7,215.42	61.31	33.90	82.16	1,324.74	834.06	4,487.09	4,421.26	65.83	68.164			
8,900.00	7,948.03	7,342.38	7,214.81	61.26	33.90	81.14	1,324.65	833.98	4,496.02	4,429.98	66.04	68.083			
8,949.68	7,950.00	7,338.10	7,210.61	61.20	33.88	80.40	1,324.01	833.46	4,503.14	4,436.88	66.26	67.966			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,000.00	7,950.00	8,407.60	7,875.00	61.14	34.36	88.97	1,421.70	197.86	4,504.26	4,433.68	70.57	63.825			
9,100.00	7,950.00	8,507.60	7,875.00	61.03	34.51	88.97	1,421.13	97.86	4,503.80	4,431.63	72.17	62.406			
9,200.00	7,950.00	8,607.60	7,875.00	60.93	35.13	88.97	1,420.55	-2.13	4,503.34	4,429.22	74.12	60.754			
9,300.00	7,950.00	8,707.60	7,875.00	60.85	36.23	88.97	1,419.98	-102.13	4,502.88	4,426.48	76.41	58.932			
9,400.00	7,950.00	8,807.60	7,875.00	60.80	37.60	88.97	1,419.40	-202.13	4,502.43	4,423.43	78.99	56.997			
9,500.00	7,950.00	8,907.60	7,875.00	60.77	39.14	88.97	1,418.83	-302.13	4,501.97	4,420.12	81.85	55.000			
9,600.00	7,950.00	9,007.60	7,875.00	60.76	40.80	88.97	1,418.25	-402.12	4,501.51	4,416.56	84.96	52.986			
9,700.00	7,950.00	9,107.59	7,875.00	60.79	42.58	88.97	1,417.68	-502.12	4,501.06	4,412.78	88.28	50.986			
9,800.00	7,950.00	9,207.59	7,875.00	60.86	44.44	88.97	1,417.10	-602.12	4,500.60	4,408.81	91.79	49.031			
9,900.00	7,950.00	9,307.59	7,875.00	60.99	46.39	88.97	1,416.53	-702.12	4,500.14	4,404.65	95.49	47.127			
10,000.00	7,950.00	9,407.59	7,875.00	61.21	48.40	88.97	1,415.95	-802.11	4,499.68	4,400.35	99.33	45.298			
10,100.00	7,950.00	9,507.59	7,875.00	61.56	50.48	88.97	1,415.38	-902.11	4,499.23	4,395.91	103.32	43.548			
10,200.00	7,950.00	9,607.59	7,875.00	62.08	52.61	88.97	1,414.80	-1,002.11	4,498.77	4,391.35	107.42	41.879			
10,300.00	7,950.00	9,707.59	7,875.00	62.87	54.78	88.97	1,414.23	-1,102.10	4,498.31	4,386.68	111.63	40.296			
10,400.00	7,950.00	9,807.59	7,875.00	63.95	57.00	88.97	1,413.65	-1,202.10	4,497.86	4,381.91	115.94	38.793			
10,500.00	7,950.00	9,907.59	7,875.00	65.35	59.26	88.97	1,413.08	-1,302.10	4,497.40	4,377.06	120.34	37.372			
10,600.00	7,950.00	10,007.59	7,875.00	67.00	61.55	88.97	1,412.50	-1,402.10	4,496.94	4,372.13	124.81	36.029			
10,700.00	7,950.00	10,107.58	7,875.00	68.85	63.87	88.97	1,411.93	-1,502.09	4,496.48	4,367.13	129.35	34.761			
10,800.00	7,950.00	10,207.58	7,875.00	70.83	66.22	88.97	1,411.35	-1,602.09	4,496.03	4,362.07	133.96	33.562			
10,900.00	7,950.00	10,307.58	7,875.00	72.91	68.59	88.97	1,410.78	-1,702.09	4,495.57	4,356.95	138.62	32.431			
11,000.00	7,950.00	10,407.58	7,875.00	75.07	70.99	88.97	1,410.20	-1,802.09	4,495.11	4,351.78	143.33	31.362			
11,100.00	7,950.00	10,507.58	7,875.00	77.28	73.40	88.97	1,409.63	-1,902.08	4,494.66	4,346.57	148.09	30.351			
11,200.00	7,950.00	10,607.58	7,875.00	79.54	75.83	88.97	1,409.05	-2,002.08	4,494.20	4,341.31	152.89	29.396			
11,300.00	7,950.00	10,707.58	7,875.00	81.83	78.28	88.97	1,408.48	-2,102.08	4,493.74	4,336.02	157.72	28.491			
11,400.00	7,950.00	10,807.58	7,875.00	84.16	80.75	88.97	1,407.90	-2,202.08	4,493.28	4,330.69	162.59	27.635			
11,500.00	7,950.00	10,907.58	7,875.00	86.51	83.22	88.97	1,407.33	-2,302.07	4,492.83	4,325.33	167.49	26.824			
11,600.00	7,950.00	11,007.57	7,875.00	88.89	85.71	88.97	1,406.75	-2,402.07	4,492.37	4,319.95	172.42	26.054			
11,700.00	7,950.00	11,107.57	7,875.00	91.29	88.22	88.97	1,406.18	-2,502.07	4,491.91	4,314.53	177.38	25.324			
11,800.00	7,950.00	11,207.57	7,875.00	93.71	90.73	88.97	1,405.60	-2,602.06	4,491.46	4,309.10	182.36	24.629			
11,900.00	7,950.00	11,307.57	7,875.00	96.14	93.25	88.97	1,405.03	-2,702.06	4,491.00	4,303.64	187.36	23.969			
12,000.00	7,950.00	11,407.57	7,875.00	98.59	95.78	88.97	1,404.45	-2,802.06	4,490.54	4,298.15	192.39	23.341			
12,100.00	7,950.00	11,507.57	7,875.00	101.05	98.32	88.97	1,403.88	-2,902.06	4,490.08	4,292.66	197.43	22.743			
12,200.00	7,950.00	11,607.57	7,875.00	103.52	100.87	88.97	1,403.30	-3,002.05	4,489.63	4,287.14	202.49	22.172			
12,300.00	7,950.00	11,707.57	7,875.00	106.01	103.42	88.97	1,402.73	-3,102.05	4,489.17	4,281.61	207.57	21.628			
12,400.00	7,950.00	11,807.57	7,875.00	108.50	105.98	88.97	1,402.15	-3,202.05	4,488.71	4,276.06	212.66	21.108			
12,500.00	7,950.00	11,907.57	7,875.00	111.01	108.55	88.97	1,401.58	-3,302.05	4,488.26	4,270.49	217.76	20.611			
12,600.00	7,950.00	12,007.56	7,875.00	113.52	111.13	88.97	1,401.00	-3,402.04	4,487.80	4,264.92	222.88	20.136			
12,700.00	7,950.00	12,107.56	7,875.00	116.04	113.70	88.97	1,400.43	-3,502.04	4,487.34	4,259.33	228.01	19.680			
12,800.00	7,950.00	12,207.56	7,875.00	118.57	116.29	88.97	1,399.85	-3,602.04	4,486.89	4,253.73	233.15	19.244			
12,900.00	7,950.00	12,307.56	7,875.00	121.11	118.88	88.97	1,399.28	-3,702.03	4,486.43	4,248.12	238.30	18.826			
13,000.00	7,950.00	12,407.56	7,875.00	123.65	121.47	88.97	1,398.70	-3,802.03	4,485.97	4,242.50	243.47	18.425			
13,100.00	7,950.00	12,507.56	7,875.00	126.20	124.06	88.97	1,398.13	-3,902.03	4,485.51	4,236.88	248.64	18.040			
13,200.00	7,950.00	12,607.56	7,875.00	128.75	126.66	88.97	1,397.55	-4,002.03	4,485.06	4,231.24	253.82	17.670			
13,300.00	7,950.00	12,707.56	7,875.00	131.31	129.27	88.97	1,396.98	-4,102.02	4,484.60	4,225.59	259.01	17.315			
13,400.00	7,950.00	12,807.56	7,875.00	133.88	131.88	88.97	1,396.40	-4,202.02	4,484.14	4,219.94	264.20	16.972			
13,500.00	7,950.00	12,907.56	7,875.00	136.45	134.49	88.97	1,395.83	-4,302.02	4,483.69	4,214.28	269.41	16.643			
13,600.00	7,950.00	13,007.55	7,875.00	139.02	137.10	88.97	1,395.25	-4,402.02	4,483.23	4,208.61	274.62	16.325			
13,700.00	7,950.00	13,107.55	7,875.00	141.60	139.72	88.97	1,394.68	-4,502.01	4,482.77	4,202.94	279.84	16.019			
13,800.00	7,950.00	13,207.55	7,875.00	144.19	142.34	88.97	1,394.10	-4,602.01	4,482.31	4,197.26	285.06	15.724			
13,900.00	7,950.00	13,307.55	7,875.00	146.77	144.96	88.97	1,393.53	-4,702.01	4,481.86	4,191.57	290.29	15.439			
14,000.00	7,950.00	13,407.55	7,875.00	149.36	147.58	88.97	1,392.95	-4,802.01	4,481.40	4,185.88	295.52	15.164			
14,100.00	7,950.00	13,507.55	7,875.00	151.96	150.21	88.97	1,392.38	-4,902.00	4,480.94	4,180.18	300.76	14.899			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,200.00	7,950.00	13,607.55	7,875.00	154.56	152.84	88.97	1,391.80	-5,002.00	4,480.49	4,174.48	306.01	14.642			
14,300.00	7,950.00	13,707.55	7,875.00	157.16	155.47	88.97	1,391.23	-5,102.00	4,480.03	4,168.77	311.26	14.393			
14,400.00	7,950.00	13,807.55	7,875.00	159.76	158.10	88.97	1,390.65	-5,201.99	4,479.57	4,163.06	316.51	14.153			
14,500.00	7,950.00	13,907.54	7,875.00	162.37	160.74	88.97	1,390.08	-5,301.99	4,479.11	4,157.35	321.77	13.920			
14,600.00	7,950.00	14,007.54	7,875.00	164.98	163.38	88.97	1,389.50	-5,401.99	4,478.66	4,151.63	327.03	13.695			
14,700.00	7,950.00	14,107.54	7,875.00	167.59	166.01	88.97	1,388.93	-5,501.99	4,478.20	4,145.90	332.30	13.476			
14,800.00	7,950.00	14,207.54	7,875.00	170.20	168.65	88.97	1,388.35	-5,601.98	4,477.74	4,140.18	337.57	13.265			
14,900.00	7,950.00	14,307.54	7,875.00	172.82	171.30	88.97	1,387.78	-5,701.98	4,477.29	4,134.44	342.84	13.059			
15,000.00	7,950.00	14,407.54	7,875.00	175.44	173.94	88.97	1,387.20	-5,801.98	4,476.83	4,128.71	348.12	12.860			
15,100.00	7,950.00	14,507.54	7,875.00	178.06	176.58	88.97	1,386.63	-5,901.98	4,476.37	4,122.97	353.40	12.667			
15,200.00	7,950.00	14,607.54	7,875.00	180.68	179.23	88.97	1,386.05	-6,001.97	4,475.91	4,117.23	358.68	12.479			
15,300.00	7,950.00	14,707.54	7,875.00	183.31	181.88	88.97	1,385.48	-6,101.97	4,475.46	4,111.49	363.97	12.296			
15,400.00	7,950.00	14,807.54	7,875.00	185.93	184.53	88.97	1,384.90	-6,201.97	4,475.00	4,105.74	369.26	12.119			
15,500.00	7,950.00	14,907.53	7,875.00	188.56	187.18	88.97	1,384.33	-6,301.96	4,474.54	4,100.00	374.55	11.947			
15,600.00	7,950.00	15,007.53	7,875.00	191.19	189.83	88.97	1,383.75	-6,401.96	4,474.09	4,094.25	379.84	11.779			
15,700.00	7,950.00	15,107.53	7,875.00	193.82	192.48	88.97	1,383.18	-6,501.96	4,473.63	4,088.49	385.14	11.616			
15,800.00	7,950.00	15,207.53	7,875.00	196.46	195.13	88.97	1,382.60	-6,601.96	4,473.17	4,082.74	390.44	11.457			
15,900.00	7,950.00	15,307.53	7,875.00	199.09	197.79	88.97	1,382.03	-6,701.95	4,472.71	4,076.98	395.74	11.302			
16,000.00	7,950.00	15,407.53	7,875.00	201.73	200.44	88.97	1,381.45	-6,801.95	4,472.26	4,071.22	401.04	11.152			
16,100.00	7,950.00	15,507.53	7,875.00	204.37	203.10	88.97	1,380.88	-6,901.95	4,471.80	4,065.45	406.35	11.005			
16,200.00	7,950.00	15,607.53	7,875.00	207.01	205.76	88.97	1,380.30	-7,001.95	4,471.34	4,059.69	411.65	10.862			
16,300.00	7,950.00	15,707.53	7,875.00	209.65	208.41	88.97	1,379.73	-7,101.94	4,470.89	4,053.92	416.96	10.723			
16,400.00	7,950.00	15,807.52	7,875.00	212.29	211.07	88.97	1,379.15	-7,201.94	4,470.43	4,048.16	422.27	10.587			
16,500.00	7,950.00	15,907.52	7,875.00	214.93	213.73	88.97	1,378.58	-7,301.94	4,469.97	4,042.39	427.59	10.454			
16,600.00	7,950.00	16,007.52	7,875.00	217.58	216.39	88.97	1,378.00	-7,401.94	4,469.52	4,036.61	432.90	10.325			
16,700.00	7,950.00	16,107.52	7,875.00	220.22	219.05	88.97	1,377.43	-7,501.93	4,469.06	4,030.84	438.22	10.198			
16,800.00	7,950.00	16,207.52	7,875.00	222.87	221.71	88.97	1,376.85	-7,601.93	4,468.60	4,025.07	443.54	10.075			
16,900.00	7,950.00	16,307.52	7,875.00	225.52	224.38	88.97	1,376.28	-7,701.93	4,468.14	4,019.29	448.86	9.955			
17,000.00	7,950.00	16,407.52	7,875.00	228.16	227.04	88.96	1,375.70	-7,801.92	4,467.69	4,013.51	454.18	9.837			
17,100.00	7,950.00	16,507.52	7,875.00	230.81	229.70	88.96	1,375.13	-7,901.92	4,467.23	4,007.73	459.50	9.722			
17,200.00	7,950.00	16,607.52	7,875.00	233.46	232.37	88.96	1,374.55	-8,001.92	4,466.77	4,001.95	464.82	9.610			
17,300.00	7,950.00	16,707.52	7,875.00	236.12	235.03	88.96	1,373.98	-8,101.92	4,466.32	3,996.17	470.15	9.500			
17,400.00	7,950.00	16,807.51	7,875.00	238.77	237.70	88.96	1,373.40	-8,201.91	4,465.86	3,990.38	475.47	9.392			
17,500.00	7,950.00	16,907.51	7,875.00	241.42	240.37	88.96	1,372.83	-8,301.91	4,465.40	3,984.60	480.80	9.287			
17,600.00	7,950.00	17,007.51	7,875.00	244.08	243.03	88.96	1,372.25	-8,401.91	4,464.94	3,978.81	486.13	9.185			
17,700.00	7,950.00	17,107.51	7,875.00	246.73	245.70	88.96	1,371.68	-8,501.91	4,464.49	3,973.03	491.46	9.084			
17,800.00	7,950.00	17,207.51	7,875.00	249.39	248.37	88.96	1,371.10	-8,601.90	4,464.03	3,967.24	496.79	8.986			
17,900.00	7,950.00	17,307.51	7,875.00	252.04	251.04	88.96	1,370.52	-8,701.90	4,463.57	3,961.45	502.12	8.889			
18,000.00	7,950.00	17,407.51	7,875.00	254.70	253.70	88.96	1,369.95	-8,801.90	4,463.12	3,955.66	507.46	8.795			
18,100.00	7,950.00	17,507.51	7,875.00	257.36	256.37	88.96	1,369.37	-8,901.89	4,462.66	3,949.87	512.79	8.703			
18,200.00	7,950.00	17,607.51	7,875.00	260.02	259.04	88.96	1,368.80	-9,001.89	4,462.20	3,944.07	518.13	8.612			
18,300.00	7,950.00	17,707.51	7,875.00	262.67	261.71	88.96	1,368.22	-9,101.89	4,461.74	3,938.28	523.46	8.523			
18,400.00	7,950.00	17,807.50	7,875.00	265.33	264.38	88.96	1,367.65	-9,201.89	4,461.29	3,932.49	528.80	8.437			
18,500.00	7,950.00	17,907.50	7,875.00	267.99	267.05	88.96	1,367.07	-9,301.88	4,460.83	3,926.69	534.14	8.351			
18,600.00	7,950.00	18,007.50	7,875.00	270.66	269.73	88.96	1,366.50	-9,401.88	4,460.37	3,920.89	539.48	8.268			
18,700.00	7,950.00	18,107.50	7,875.00	273.32	272.40	88.96	1,365.92	-9,501.88	4,459.92	3,915.10	544.82	8.186			
18,800.00	7,950.00	18,207.50	7,875.00	275.98	275.07	88.96	1,365.35	-9,601.88	4,459.46	3,909.30	550.16	8.106			
18,834.61	7,950.00	18,221.72	7,875.00	276.90	275.45	88.96	1,365.27	-9,616.10	4,459.35	3,907.94	551.41	8.087			
18,847.73	7,950.00	18,221.72	7,875.00	277.25	275.45	88.96	1,365.27	-9,616.10	4,459.37	3,907.64	551.72	8.083 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	4.90	4.90	0.00	0.01	-0.13	250.25	-0.56	250.25					
100.00	100.00	104.90	104.90	0.13	0.15	-0.13	250.25	-0.56	250.25	249.97	0.29	873.728		
200.00	200.00	204.90	204.90	0.49	0.51	-0.13	250.25	-0.56	250.25	249.25	1.00	249.414		
250.00	250.00	254.90	254.90	0.67	0.69	-0.13	250.25	-0.56	250.25	248.89	1.36	183.761	CC, ES	
300.00	300.00	302.68	302.67	0.84	0.86	-163.45	250.49	-0.14	250.91	249.21	1.70	147.313		
400.00	399.93	398.41	398.35	1.19	1.20	-162.97	252.11	2.80	255.96	253.57	2.39	107.158		
500.00	499.68	493.54	493.24	1.54	1.55	-162.10	255.25	8.50	265.99	262.90	3.09	85.961		
600.00	599.13	587.66	586.88	1.92	1.90	-160.93	259.85	16.84	281.05	277.23	3.81	73.725		
700.00	698.15	682.30	680.69	2.32	2.27	-159.55	265.88	27.76	301.03	296.48	4.55	66.231		
800.00	796.63	779.32	776.78	2.74	2.66	-158.39	272.35	39.50	324.66	319.36	5.30	61.264		
900.00	894.44	875.58	872.11	3.20	3.06	-157.55	278.78	51.15	351.50	345.44	6.06	57.993		
1,000.00	991.46	970.96	966.58	3.70	3.45	-156.98	285.15	62.69	381.45	374.62	6.83	55.858		
1,100.00	1,087.58	1,065.35	1,060.06	4.24	3.84	-156.63	291.45	74.11	414.46	406.85	7.60	54.502		
1,200.00	1,182.68	1,158.63	1,152.45	4.83	4.23	-156.44	297.68	85.40	450.47	442.09	8.39	53.720		
1,300.00	1,276.65	1,250.69	1,243.62	5.46	4.62	-156.38	303.83	96.54	489.46	480.29	9.17	53.367		
1,400.00	1,369.36	1,341.41	1,333.47	6.14	5.00	-156.41	309.88	107.52	531.39	521.43	9.96	53.346		
1,471.15	1,434.50	1,405.08	1,396.54	6.66	5.27	-156.47	314.14	115.22	562.99	552.47	10.53	53.485		
1,500.00	1,460.77	1,430.75	1,421.96	6.87	5.37	-156.61	315.85	118.33	576.11	565.35	10.76	53.563		
1,600.00	1,551.82	1,519.71	1,510.07	7.62	5.75	-157.07	321.79	129.10	621.58	610.04	11.54	53.865		
1,700.00	1,642.88	1,608.68	1,598.18	8.38	6.12	-157.46	327.73	139.86	667.08	654.75	12.33	54.108		
1,800.00	1,733.93	1,702.36	1,686.29	9.15	6.52	-157.80	333.67	150.63	712.60	699.46	13.14	54.227		
1,900.00	1,824.98	1,786.60	1,774.39	9.93	6.87	-158.10	339.61	161.39	758.14	744.22	13.92	54.472		
2,000.00	1,916.03	1,875.56	1,862.50	10.71	7.25	-158.37	345.55	172.16	803.70	788.98	14.72	54.609		
2,100.00	2,007.08	1,964.53	1,950.61	11.49	7.62	-158.61	351.49	182.93	849.26	833.74	15.52	54.726		
2,200.00	2,098.13	2,053.49	2,038.72	12.28	8.00	-158.82	357.43	193.69	894.84	878.52	16.32	54.825		
2,300.00	2,189.19	2,142.45	2,126.83	13.07	8.38	-159.01	363.37	204.46	940.43	923.30	17.13	54.910		
2,400.00	2,280.24	2,231.41	2,214.94	13.86	8.75	-159.19	369.31	215.22	986.02	968.09	17.93	54.984		
2,500.00	2,371.29	2,320.38	2,303.05	14.65	9.13	-159.35	375.25	225.99	1,031.62	1,012.88	18.74	55.048		
2,600.00	2,462.34	2,409.34	2,391.16	15.44	9.51	-159.49	381.19	236.75	1,077.23	1,057.68	19.55	55.104		
2,700.00	2,553.39	2,501.70	2,479.26	16.24	9.90	-159.63	387.13	247.52	1,122.84	1,102.46	20.37	55.115		
2,800.00	2,644.45	2,587.26	2,567.37	17.03	10.26	-159.75	393.07	258.29	1,168.45	1,147.28	21.17	55.197		
2,900.00	2,735.50	2,676.23	2,655.48	17.83	10.64	-159.87	399.01	269.05	1,214.07	1,192.09	21.98	55.236		
3,000.00	2,826.55	2,765.19	2,743.59	18.63	11.01	-159.97	404.95	279.82	1,259.70	1,236.90	22.79	55.270		
3,100.00	2,917.60	2,854.15	2,831.70	19.43	11.39	-160.07	410.89	290.58	1,305.32	1,281.72	23.60	55.301		
3,200.00	3,008.65	2,943.11	2,919.81	20.23	11.77	-160.16	416.83	301.35	1,350.95	1,326.54	24.42	55.329		
3,300.00	3,099.70	3,032.08	3,007.92	21.03	12.14	-160.25	422.77	312.12	1,396.58	1,371.35	25.23	55.354		
3,400.00	3,190.76	3,121.04	3,096.03	21.83	12.52	-160.33	428.71	322.88	1,442.22	1,416.17	26.04	55.376		
3,500.00	3,281.81	3,210.00	3,184.13	22.63	12.90	-160.41	434.65	333.65	1,487.86	1,461.00	26.86	55.396		
3,600.00	3,372.86	3,301.04	3,272.24	23.43	13.28	-160.48	440.59	344.41	1,533.49	1,505.81	27.68	55.397		
3,700.00	3,463.91	3,387.93	3,360.35	24.23	13.65	-160.54	446.53	355.18	1,579.13	1,550.65	28.49	55.431		
3,800.00	3,554.96	3,476.89	3,448.46	25.03	14.03	-160.61	452.47	365.94	1,624.78	1,595.47	29.30	55.446		
3,900.00	3,646.01	3,565.85	3,536.57	25.83	14.41	-160.67	458.41	376.71	1,670.42	1,640.30	30.12	55.459		
4,000.00	3,737.07	3,654.82	3,624.68	26.63	14.78	-160.72	464.35	387.48	1,716.06	1,685.13	30.94	55.472		
4,100.00	3,828.12	3,743.78	3,712.79	27.43	15.16	-160.78	470.29	398.24	1,761.71	1,729.96	31.75	55.483		
4,200.00	3,919.17	3,832.74	3,800.90	28.24	15.54	-160.83	476.23	409.01	1,807.36	1,774.79	32.57	55.493		
4,300.00	4,010.22	3,921.70	3,889.00	29.04	15.92	-160.88	482.17	419.77	1,853.00	1,819.62	33.39	55.502		
4,400.00	4,101.27	4,010.67	3,977.11	29.84	16.29	-160.92	488.11	430.54	1,898.65	1,864.45	34.20	55.511		
4,500.00	4,192.33	4,100.37	4,065.22	30.65	16.68	-160.97	494.05	441.31	1,944.30	1,909.28	35.02	55.513		
4,600.00	4,283.38	4,188.59	4,153.33	31.45	17.05	-161.01	499.99	452.07	1,989.95	1,954.12	35.84	55.525		
4,700.00	4,374.43	4,277.55	4,241.44	32.25	17.43	-161.05	505.93	462.84	2,035.61	1,998.95	36.66	55.531		
4,800.00	4,465.48	4,366.52	4,329.55	33.05	17.80	-161.09	511.87	473.60	2,081.26	2,043.78	37.48	55.537		
4,900.00	4,556.53	4,455.48	4,417.66	33.86	18.18	-161.13	517.81	484.37	2,126.91	2,088.62	38.29	55.542		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 1BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,000.00	4,647.58	4,544.44	4,505.77	34.66	18.56	-161.16	523.75	495.14	2,172.57	2,133.45	39.11	55.546			
5,100.00	4,738.64	4,633.40	4,593.87	35.47	18.94	-161.19	529.69	505.90	2,218.22	2,178.29	39.93	55.550			
5,200.00	4,829.69	4,722.37	4,681.98	36.27	19.31	-161.23	535.63	516.67	2,263.88	2,223.12	40.75	55.554			
5,300.00	4,920.74	4,811.33	4,770.09	37.07	19.69	-161.26	541.57	527.43	2,309.53	2,267.96	41.57	55.557			
5,400.00	5,011.79	4,900.29	4,858.20	37.88	20.07	-161.29	547.51	538.20	2,355.19	2,312.80	42.39	55.559			
5,500.00	5,102.84	4,989.25	4,946.31	38.68	20.45	-161.32	553.44	548.96	2,400.84	2,357.63	43.21	55.562			
5,600.00	5,193.89	5,078.22	5,034.42	39.48	20.82	-161.34	559.38	559.73	2,446.50	2,402.47	44.03	55.564			
5,700.00	5,284.95	5,167.18	5,122.53	40.29	21.20	-161.37	565.32	570.50	2,492.16	2,447.31	44.85	55.565			
5,800.00	5,376.00	5,256.14	5,210.64	41.09	21.58	-161.40	571.26	581.26	2,537.82	2,492.15	45.67	55.566			
5,900.00	5,467.05	5,345.10	5,298.74	41.90	21.96	-161.42	577.20	592.03	2,583.48	2,536.98	46.49	55.567			
6,000.00	5,558.10	5,434.07	5,386.85	42.70	22.34	-161.45	583.14	602.79	2,629.13	2,581.82	47.31	55.568			
6,100.00	5,649.15	5,523.03	5,474.96	43.51	22.71	-161.47	589.08	613.56	2,674.79	2,626.66	48.14	55.568			
6,200.00	5,740.21	5,611.99	5,563.07	44.31	23.09	-161.49	595.02	624.33	2,720.45	2,671.50	48.96	55.569			
6,300.00	5,831.26	5,700.95	5,651.18	45.11	23.47	-161.51	600.96	635.09	2,766.11	2,716.33	49.78	55.569			
6,400.00	5,922.31	5,789.92	5,739.29	45.92	23.85	-161.53	606.90	645.86	2,811.77	2,761.17	50.60	55.568			
6,500.00	6,013.36	5,878.88	5,827.40	46.72	24.22	-161.55	612.84	656.62	2,857.43	2,806.01	51.42	55.568			
6,600.00	6,104.41	5,967.84	5,915.51	47.53	24.60	-161.57	618.78	667.39	2,903.09	2,850.85	52.24	55.567			
6,700.00	6,195.46	6,056.80	6,003.62	48.33	24.98	-161.59	624.72	678.15	2,948.75	2,895.69	53.07	55.566			
6,800.00	6,286.52	6,145.77	6,091.72	49.14	25.36	-161.61	630.66	688.92	2,994.42	2,940.53	53.89	55.565			
6,900.00	6,377.57	6,234.73	6,179.83	49.94	25.73	-161.63	636.60	699.69	3,040.08	2,985.36	54.71	55.564			
7,000.00	6,468.62	6,323.69	6,267.94	50.75	26.11	-161.65	642.54	710.45	3,085.74	3,030.20	55.54	55.562			
7,100.00	6,559.67	6,412.66	6,356.05	51.55	26.49	-161.66	648.48	721.22	3,131.40	3,075.04	56.36	55.560			
7,200.00	6,650.72	6,501.62	6,444.16	52.36	26.87	-161.68	654.42	731.98	3,177.06	3,119.88	57.18	55.558			
7,300.00	6,741.77	6,609.42	6,532.27	53.16	27.32	-161.69	660.36	742.75	3,222.72	3,164.64	58.09	55.482			
7,400.00	6,832.83	6,679.54	6,620.38	53.97	27.62	-161.71	666.30	753.52	3,268.39	3,209.55	58.83	55.554			
7,500.00	6,923.88	6,768.51	6,708.49	54.77	28.00	-161.73	672.24	764.28	3,314.05	3,254.39	59.66	55.552			
7,600.00	7,014.93	6,857.47	6,796.59	55.58	28.38	-161.74	678.18	775.05	3,359.71	3,299.23	60.48	55.550			
7,700.00	7,105.98	6,946.43	6,884.70	56.38	28.76	-161.75	684.12	785.81	3,405.38	3,344.07	61.31	55.547			
7,800.00	7,197.03	7,035.39	6,972.81	57.19	29.13	-161.77	690.06	796.58	3,451.04	3,388.91	62.13	55.544			
7,900.00	7,288.09	7,124.36	7,060.92	57.99	29.51	-161.78	696.00	807.34	3,496.70	3,433.74	62.96	55.541			
7,982.08	7,362.82	7,202.62	7,133.24	58.65	29.84	-161.79	700.88	816.18	3,534.18	3,470.53	63.66	55.520			
8,000.00	7,379.16	7,213.31	7,149.02	58.79	29.89	-166.59	701.94	818.11	3,542.38	3,478.60	63.78	55.539			
8,050.00	7,424.95	7,257.59	7,192.88	59.18	30.08	179.56	704.90	823.47	3,565.32	3,501.14	64.18	55.550			
8,100.00	7,470.74	7,301.34	7,236.21	59.53	30.26	165.80	707.82	828.76	3,588.24	3,523.68	64.57	55.575			
8,150.00	7,516.17	7,344.23	7,278.68	59.84	30.44	153.04	710.68	833.95	3,611.01	3,546.08	64.93	55.613			
8,200.00	7,560.91	7,386.61	7,320.67	60.13	30.62	141.83	713.51	838.96	3,633.48	3,568.20	65.28	55.661			
8,250.00	7,604.61	7,431.18	7,365.04	60.38	30.79	132.29	716.49	841.71	3,655.50	3,589.89	65.61	55.720			
8,300.00	7,646.94	7,477.34	7,411.09	60.60	30.93	124.30	719.56	840.90	3,676.92	3,611.02	65.90	55.798			
8,350.00	7,687.58	7,525.44	7,458.83	60.78	31.05	117.62	722.71	836.12	3,697.57	3,631.42	66.16	55.891			
8,400.00	7,726.22	7,575.85	7,508.24	60.94	31.15	112.05	725.96	826.81	3,717.32	3,650.93	66.39	55.995			
8,450.00	7,762.57	7,628.98	7,559.24	61.07	31.23	107.39	729.28	812.34	3,736.00	3,669.41	66.59	56.103			
8,500.00	7,796.34	7,685.29	7,611.58	61.18	31.29	103.50	732.65	791.90	3,753.47	3,686.70	66.77	56.211			
8,550.00	7,827.28	7,745.25	7,664.82	61.26	31.34	100.26	736.04	764.60	3,769.60	3,702.66	66.94	56.315			
8,600.00	7,855.16	7,809.33	7,718.24	61.31	31.36	97.58	739.41	729.44	3,784.22	3,717.13	67.09	56.407			
8,650.00	7,879.76	7,877.91	7,770.70	61.35	31.37	95.39	742.65	685.44	3,797.21	3,729.98	67.24	56.476			
8,700.00	7,900.90	7,951.23	7,820.55	61.37	31.37	93.64	745.67	631.83	3,808.43	3,741.03	67.40	56.505			
8,750.00	7,918.42	8,029.29	7,865.66	61.37	31.40	92.26	748.31	568.25	3,817.74	3,750.12	67.62	56.460			
8,800.00	7,932.18	8,111.69	7,903.46	61.35	31.48	91.23	750.42	495.14	3,825.02	3,757.10	67.92	56.316			
8,850.00	7,942.07	8,197.62	7,931.32	61.31	31.66	90.51	751.81	413.95	3,830.18	3,761.84	68.34	56.043			
8,900.00	7,948.03	8,285.79	7,947.00	61.26	31.97	90.08	752.36	327.27	3,833.14	3,764.22	68.92	55.619			
8,949.68	7,950.00	8,361.13	7,950.00	61.20	32.36	89.93	752.12	252.04	3,833.88	3,764.31	69.57	55.106			
9,000.00	7,950.00	8,411.45	7,950.00	61.14	32.68	89.93	751.83	201.72	3,833.65	3,763.41	70.24	54.580			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 1BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,100.00	7,950.00	8,511.45	7,950.00	61.03	33.51	89.93	751.26	101.72	3,833.20	3,761.35	71.85	53.352			
9,200.00	7,950.00	8,611.45	7,950.00	60.93	34.54	89.93	750.68	1.72	3,832.74	3,758.93	73.81	51.925			
9,300.00	7,950.00	8,711.45	7,950.00	60.85	35.77	89.93	750.11	-98.28	3,832.28	3,756.17	76.11	50.351			
9,400.00	7,950.00	8,811.45	7,950.00	60.80	37.15	89.93	749.53	-198.27	3,831.82	3,753.11	78.71	48.682			
9,500.00	7,950.00	8,911.45	7,950.00	60.77	38.68	89.93	748.96	-298.27	3,831.37	3,749.78	81.58	46.963			
9,600.00	7,950.00	9,011.45	7,950.00	60.76	40.33	89.93	748.38	-398.27	3,830.91	3,746.21	84.70	45.229			
9,700.00	7,950.00	9,111.45	7,950.00	60.79	42.09	89.93	747.81	-498.26	3,830.45	3,742.42	88.04	43.510			
9,800.00	7,950.00	9,211.44	7,950.00	60.86	43.94	89.93	747.23	-598.26	3,830.00	3,738.43	91.57	41.828			
9,900.00	7,950.00	9,311.44	7,950.00	60.99	45.88	89.93	746.66	-698.26	3,829.54	3,734.27	95.27	40.197			
10,000.00	7,950.00	9,411.44	7,950.00	61.21	47.88	89.93	746.08	-798.26	3,829.08	3,729.96	99.13	38.628			
10,100.00	7,950.00	9,511.44	7,950.00	61.56	49.96	89.93	745.51	-898.25	3,828.63	3,725.50	103.12	37.128			
10,200.00	7,950.00	9,611.44	7,950.00	62.08	52.09	89.93	744.93	-998.25	3,828.17	3,720.93	107.24	35.699			
10,300.00	7,950.00	9,711.44	7,950.00	62.87	54.26	89.93	744.36	-1,098.25	3,827.71	3,716.25	111.46	34.342			
10,400.00	7,950.00	9,811.44	7,950.00	63.95	56.49	89.93	743.78	-1,198.25	3,827.25	3,711.48	115.78	33.057			
10,500.00	7,950.00	9,911.44	7,950.00	65.35	58.75	89.93	743.21	-1,298.24	3,826.80	3,706.62	120.18	31.842			
10,600.00	7,950.00	10,011.44	7,950.00	67.00	61.04	89.93	742.63	-1,398.24	3,826.34	3,701.68	124.66	30.694			
10,700.00	7,950.00	10,111.44	7,950.00	68.85	63.37	89.93	742.06	-1,498.24	3,825.88	3,696.67	129.21	29.609			
10,800.00	7,950.00	10,211.43	7,950.00	70.83	65.73	89.93	741.48	-1,598.23	3,825.43	3,691.60	133.82	28.586			
10,900.00	7,950.00	10,311.43	7,950.00	72.91	68.11	89.93	740.91	-1,698.23	3,824.97	3,686.48	138.49	27.619			
11,000.00	7,950.00	10,411.43	7,950.00	75.07	70.51	89.93	740.33	-1,798.23	3,824.51	3,681.30	143.21	26.706			
11,100.00	7,950.00	10,511.43	7,950.00	77.28	72.93	89.93	739.76	-1,898.23	3,824.05	3,676.08	147.97	25.843			
11,200.00	7,950.00	10,611.43	7,950.00	79.54	75.37	89.93	739.18	-1,998.22	3,823.60	3,670.82	152.77	25.028			
11,300.00	7,950.00	10,711.43	7,950.00	81.83	77.83	89.93	738.61	-2,098.22	3,823.14	3,665.52	157.62	24.256			
11,400.00	7,950.00	10,811.43	7,950.00	84.16	80.30	89.93	738.04	-2,198.22	3,822.68	3,660.19	162.49	23.526			
11,500.00	7,950.00	10,911.43	7,950.00	86.51	82.78	89.93	737.46	-2,298.22	3,822.23	3,654.83	167.40	22.833			
11,600.00	7,950.00	11,011.43	7,950.00	88.89	85.28	89.93	736.89	-2,398.21	3,821.77	3,649.44	172.33	22.177			
11,700.00	7,950.00	11,111.42	7,950.00	91.29	87.79	89.93	736.31	-2,498.21	3,821.31	3,644.02	177.29	21.554			
11,800.00	7,950.00	11,211.42	7,950.00	93.71	90.31	89.93	735.74	-2,598.21	3,820.86	3,638.58	182.28	20.962			
11,900.00	7,950.00	11,311.42	7,950.00	96.14	92.84	89.93	735.16	-2,698.21	3,820.40	3,633.11	187.28	20.399			
12,000.00	7,950.00	11,411.42	7,950.00	98.59	95.38	89.93	734.59	-2,798.20	3,819.94	3,627.63	192.31	19.863			
12,100.00	7,950.00	11,511.42	7,950.00	101.05	97.92	89.93	734.01	-2,898.20	3,819.48	3,622.13	197.36	19.353			
12,200.00	7,950.00	11,611.42	7,950.00	103.52	100.47	89.93	733.44	-2,998.20	3,819.03	3,616.61	202.42	18.867			
12,300.00	7,950.00	11,711.42	7,950.00	106.01	103.04	89.93	732.86	-3,098.19	3,818.57	3,611.07	207.50	18.403			
12,400.00	7,950.00	11,811.42	7,950.00	108.50	105.60	89.93	732.29	-3,198.19	3,818.11	3,605.52	212.59	17.960			
12,500.00	7,950.00	11,911.42	7,950.00	111.01	108.18	89.93	731.71	-3,298.19	3,817.66	3,599.95	217.70	17.536			
12,600.00	7,950.00	12,011.42	7,950.00	113.52	110.75	89.93	731.14	-3,398.19	3,817.20	3,594.38	222.82	17.131			
12,700.00	7,950.00	12,111.41	7,950.00	116.04	113.34	89.93	730.56	-3,498.18	3,816.74	3,588.79	227.96	16.743			
12,800.00	7,950.00	12,211.41	7,950.00	118.57	115.93	89.93	729.99	-3,598.18	3,816.28	3,583.18	233.10	16.372			
12,900.00	7,950.00	12,311.41	7,950.00	121.11	118.52	89.93	729.41	-3,698.18	3,815.83	3,577.57	238.26	16.016			
13,000.00	7,950.00	12,411.41	7,950.00	123.65	121.12	89.93	728.84	-3,798.18	3,815.37	3,571.95	243.42	15.674			
13,100.00	7,950.00	12,511.41	7,950.00	126.20	123.72	89.93	728.26	-3,898.17	3,814.91	3,566.32	248.59	15.346			
13,200.00	7,950.00	12,611.41	7,950.00	128.75	126.32	89.93	727.69	-3,998.17	3,814.46	3,560.68	253.78	15.031			
13,300.00	7,950.00	12,711.41	7,950.00	131.31	128.93	89.93	727.11	-4,098.17	3,814.00	3,555.03	258.97	14.728			
13,400.00	7,950.00	12,811.41	7,950.00	133.88	131.54	89.93	726.54	-4,198.16	3,813.54	3,549.37	264.17	14.436			
13,500.00	7,950.00	12,911.41	7,950.00	136.45	134.16	89.93	725.96	-4,298.16	3,813.09	3,543.71	269.37	14.155			
13,600.00	7,950.00	13,011.40	7,950.00	139.02	136.78	89.93	725.39	-4,398.16	3,812.63	3,538.04	274.59	13.885			
13,700.00	7,950.00	13,111.40	7,950.00	141.60	139.40	89.93	724.81	-4,498.16	3,812.17	3,532.37	279.81	13.624			
13,800.00	7,950.00	13,211.40	7,950.00	144.19	142.02	89.93	724.24	-4,598.15	3,811.71	3,526.68	285.03	13.373			
13,900.00	7,950.00	13,311.40	7,950.00	146.77	144.65	89.93	723.66	-4,698.15	3,811.26	3,520.99	290.26	13.130			
14,000.00	7,950.00	13,411.40	7,950.00	149.36	147.28	89.93	723.09	-4,798.15	3,810.80	3,515.30	295.50	12.896			
14,100.00	7,950.00	13,511.40	7,950.00	151.96	149.91	89.93	722.51	-4,898.15	3,810.34	3,509.60	300.74	12.670			
14,200.00	7,950.00	13,611.40	7,950.00	154.56	152.54	89.93	721.94	-4,998.14	3,809.89	3,503.90	305.99	12.451			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 1BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,300.00	7,950.00	13,711.40	7,950.00	157.16	155.18	89.93	721.36	-5,098.14	3,809.43	3,498.19	311.24	12.240			
14,400.00	7,950.00	13,811.40	7,950.00	159.76	157.81	89.93	720.79	-5,198.14	3,808.97	3,492.48	316.49	12.035			
14,500.00	7,950.00	13,911.40	7,950.00	162.37	160.45	89.93	720.21	-5,298.14	3,808.51	3,486.76	321.75	11.837			
14,600.00	7,950.00	14,011.39	7,950.00	164.98	163.09	89.93	719.64	-5,398.13	3,808.06	3,481.04	327.02	11.645			
14,700.00	7,950.00	14,111.39	7,950.00	167.59	165.73	89.93	719.06	-5,498.13	3,807.60	3,475.31	332.29	11.459			
14,800.00	7,950.00	14,211.39	7,950.00	170.20	168.38	89.93	718.49	-5,598.13	3,807.14	3,469.59	337.56	11.278			
14,900.00	7,950.00	14,311.39	7,950.00	172.82	171.02	89.93	717.91	-5,698.12	3,806.69	3,463.85	342.83	11.104			
15,000.00	7,950.00	14,411.39	7,950.00	175.44	173.67	89.93	717.34	-5,798.12	3,806.23	3,458.12	348.11	10.934			
15,100.00	7,950.00	14,511.39	7,950.00	178.06	176.31	89.93	716.76	-5,898.12	3,805.77	3,452.38	353.39	10.769			
15,200.00	7,950.00	14,611.39	7,950.00	180.68	178.96	89.93	716.19	-5,998.12	3,805.31	3,446.64	358.68	10.609			
15,300.00	7,950.00	14,711.39	7,950.00	183.31	181.61	89.93	715.61	-6,098.11	3,804.86	3,440.89	363.96	10.454			
15,400.00	7,950.00	14,811.39	7,950.00	185.93	184.26	89.93	715.04	-6,198.11	3,804.40	3,435.15	369.25	10.303			
15,500.00	7,950.00	14,911.39	7,950.00	188.56	186.92	89.93	714.46	-6,298.11	3,803.94	3,429.40	374.55	10.156			
15,600.00	7,950.00	15,011.38	7,950.00	191.19	189.57	89.93	713.89	-6,398.11	3,803.49	3,423.64	379.84	10.013			
15,700.00	7,950.00	15,111.38	7,950.00	193.82	192.23	89.93	713.31	-6,498.10	3,803.03	3,417.89	385.14	9.874			
15,800.00	7,950.00	15,211.38	7,950.00	196.46	194.88	89.93	712.74	-6,598.10	3,802.57	3,412.13	390.44	9.739			
15,900.00	7,950.00	15,311.38	7,950.00	199.09	197.54	89.93	712.16	-6,698.10	3,802.12	3,406.37	395.74	9.608			
16,000.00	7,950.00	15,411.38	7,950.00	201.73	200.20	89.93	711.59	-6,798.09	3,801.66	3,400.61	401.05	9.479			
16,100.00	7,950.00	15,511.38	7,950.00	204.37	202.85	89.93	711.01	-6,898.09	3,801.20	3,394.85	406.35	9.354			
16,200.00	7,950.00	15,611.38	7,950.00	207.01	205.51	89.93	710.44	-6,998.09	3,800.74	3,389.08	411.66	9.233			
16,300.00	7,950.00	15,711.38	7,950.00	209.65	208.17	89.93	709.86	-7,098.09	3,800.29	3,383.31	416.97	9.114			
16,400.00	7,950.00	15,811.38	7,950.00	212.29	210.83	89.93	709.29	-7,198.08	3,799.83	3,377.54	422.29	8.998			
16,500.00	7,950.00	15,911.37	7,950.00	214.93	213.50	89.93	708.71	-7,298.08	3,799.37	3,371.77	427.60	8.885			
16,600.00	7,950.00	16,011.37	7,950.00	217.58	216.16	89.93	708.14	-7,398.08	3,798.92	3,366.00	432.92	8.775			
16,700.00	7,950.00	16,111.37	7,950.00	220.22	218.82	89.93	707.56	-7,498.08	3,798.46	3,360.22	438.23	8.668			
16,800.00	7,950.00	16,211.37	7,950.00	222.87	221.48	89.93	706.99	-7,598.07	3,798.00	3,354.45	443.55	8.563			
16,900.00	7,950.00	16,311.37	7,950.00	225.52	224.15	89.93	706.41	-7,698.07	3,797.54	3,348.67	448.87	8.460			
17,000.00	7,950.00	16,411.37	7,950.00	228.16	226.81	89.93	705.84	-7,798.07	3,797.09	3,342.89	454.20	8.360			
17,100.00	7,950.00	16,511.37	7,950.00	230.81	229.48	89.93	705.26	-7,898.06	3,796.63	3,337.11	459.52	8.262			
17,200.00	7,950.00	16,611.37	7,950.00	233.46	232.15	89.93	704.69	-7,998.06	3,796.17	3,331.33	464.84	8.167			
17,300.00	7,950.00	16,711.37	7,950.00	236.12	234.81	89.93	704.11	-8,098.06	3,795.72	3,325.55	470.17	8.073			
17,400.00	7,950.00	16,811.37	7,950.00	238.77	237.48	89.93	703.54	-8,198.06	3,795.26	3,319.76	475.50	7.982			
17,500.00	7,950.00	16,911.36	7,950.00	241.42	240.15	89.93	702.96	-8,298.05	3,794.80	3,313.97	480.83	7.892			
17,600.00	7,950.00	17,011.36	7,950.00	244.08	242.82	89.93	702.39	-8,398.05	3,794.35	3,308.19	486.16	7.805			
17,700.00	7,950.00	17,111.36	7,950.00	246.73	245.49	89.93	701.81	-8,498.05	3,793.89	3,302.40	491.49	7.719			
17,800.00	7,950.00	17,211.36	7,950.00	249.39	248.15	89.93	701.24	-8,598.05	3,793.43	3,296.61	496.82	7.635			
17,900.00	7,950.00	17,311.36	7,950.00	252.04	250.82	89.93	700.66	-8,698.04	3,792.97	3,290.82	502.15	7.553			
18,000.00	7,950.00	17,411.36	7,950.00	254.70	253.49	89.93	700.09	-8,798.04	3,792.52	3,285.03	507.49	7.473			
18,100.00	7,950.00	17,511.36	7,950.00	257.36	256.17	89.93	699.51	-8,898.04	3,792.06	3,279.24	512.82	7.394			
18,200.00	7,950.00	17,611.36	7,950.00	260.02	258.84	89.93	698.94	-8,998.04	3,791.60	3,273.44	518.16	7.317			
18,300.00	7,950.00	17,711.36	7,950.00	262.67	261.51	89.93	698.36	-9,098.03	3,791.15	3,267.65	523.50	7.242			
18,400.00	7,950.00	17,811.35	7,950.00	265.33	264.18	89.93	697.79	-9,198.03	3,790.69	3,261.85	528.84	7.168			
18,500.00	7,950.00	17,911.35	7,950.00	267.99	266.85	89.93	697.21	-9,298.03	3,790.23	3,256.06	534.18	7.095			
18,600.00	7,950.00	18,011.35	7,950.00	270.66	269.53	89.93	696.64	-9,398.02	3,789.77	3,250.26	539.52	7.024			
18,700.00	7,950.00	18,111.35	7,950.00	273.32	272.20	89.93	696.06	-9,498.02	3,789.32	3,244.46	544.86	6.955			
18,800.00	7,950.00	18,211.35	7,950.00	275.98	274.87	89.93	695.49	-9,598.02	3,788.86	3,238.66	550.20	6.886			
18,836.45	7,950.00	18,230.53	7,950.00	276.95	275.38	89.93	695.38	-9,617.19	3,788.73	3,237.12	551.61	6.868			
18,847.73	7,950.00	18,230.53	7,950.00	277.25	275.38	89.93	695.38	-9,617.19	3,788.75	3,236.89	551.86	6.865 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 2AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	4.50	4.50	0.00	0.01	-0.16	199.98	-0.56	199.98						
100.00	100.00	104.50	104.50	0.13	0.15	-0.16	199.98	-0.56	199.98	199.70	0.28	701.734			
200.00	200.00	204.50	204.50	0.49	0.51	-0.16	199.98	-0.56	199.98	198.98	1.00	199.599			
250.00	250.00	254.54	254.54	0.67	0.69	-0.16	199.98	-0.56	199.98	198.62	1.36	147.032			
250.69	250.69	255.23	255.23	0.67	0.69	-163.55	199.98	-0.56	199.98	198.62	1.36	146.517	CC, ES		
300.00	300.00	304.98	304.97	0.84	0.86	-163.44	199.92	-0.04	200.34	198.63	1.71	117.306			
400.00	399.93	405.73	405.66	1.19	1.22	-162.67	199.46	3.64	203.24	200.84	2.40	84.645			
500.00	499.68	506.15	505.81	1.54	1.58	-161.23	198.57	10.79	209.17	206.05	3.12	67.042			
600.00	599.13	606.00	605.09	1.92	1.96	-159.26	197.26	21.36	218.26	214.40	3.86	56.535			
700.00	698.15	704.95	703.28	2.32	2.35	-157.33	195.76	33.46	230.75	226.13	4.62	49.929			
800.00	796.63	803.54	801.11	2.74	2.74	-155.90	194.26	45.52	246.59	241.20	5.40	45.707			
900.00	894.44	901.63	898.46	3.20	3.14	-154.91	192.77	57.52	265.66	259.48	6.18	42.987			
1,000.00	991.46	1,000.89	995.20	3.70	3.54	-154.31	191.29	69.44	287.85	280.87	6.98	41.226			
1,100.00	1,087.58	1,104.14	1,091.21	4.24	3.97	-154.02	189.83	81.27	313.11	305.29	7.81	40.073			
1,200.00	1,182.68	1,208.23	1,186.39	4.83	4.39	-153.98	188.37	93.00	341.38	332.73	8.66	39.425			
1,300.00	1,276.65	1,286.71	1,280.61	5.46	4.71	-154.12	186.93	104.62	372.67	363.26	9.41	39.602			
1,400.00	1,369.36	1,380.57	1,373.75	6.14	5.10	-154.39	185.50	116.10	406.95	396.72	10.23	39.766			
1,471.15	1,434.50	1,446.63	1,439.31	6.66	5.37	-154.63	184.50	124.18	433.16	422.33	10.82	40.024			
1,500.00	1,460.77	1,473.29	1,465.77	6.87	5.48	-154.84	184.10	127.44	444.09	433.03	11.06	40.148			
1,600.00	1,551.82	1,565.70	1,557.47	7.62	5.86	-155.47	182.69	138.74	482.03	470.15	11.88	40.572			
1,700.00	1,642.88	1,658.10	1,649.17	8.38	6.24	-156.01	181.29	150.04	520.01	507.30	12.70	40.931			
1,800.00	1,733.93	1,750.51	1,740.87	9.15	6.62	-156.47	179.89	161.34	558.02	544.49	13.53	41.240			
1,900.00	1,824.98	1,842.91	1,832.57	9.93	7.00	-156.88	178.49	172.65	596.06	581.70	14.36	41.507			
2,000.00	1,916.03	1,935.32	1,924.27	10.71	7.39	-157.24	177.08	183.95	634.12	618.93	15.19	41.741			
2,100.00	2,007.08	2,027.72	2,015.97	11.49	7.77	-157.55	175.68	195.25	672.20	656.18	16.03	41.947			
2,200.00	2,098.13	2,120.13	2,107.67	12.28	8.15	-157.84	174.28	206.55	710.30	693.44	16.86	42.129			
2,300.00	2,189.19	2,212.53	2,199.37	13.07	8.53	-158.09	172.87	217.85	748.41	730.71	17.70	42.293			
2,400.00	2,280.24	2,304.93	2,291.07	13.86	8.91	-158.32	171.47	229.16	786.53	768.00	18.53	42.439			
2,500.00	2,371.29	2,402.66	2,382.77	14.65	9.32	-158.53	170.07	240.46	824.66	805.27	19.39	42.524			
2,600.00	2,462.34	2,489.74	2,474.47	15.44	9.68	-158.72	168.67	251.76	862.81	842.60	20.21	42.692			
2,700.00	2,553.39	2,582.15	2,566.17	16.24	10.06	-158.89	167.26	263.06	900.95	879.90	21.05	42.802			
2,800.00	2,644.45	2,674.55	2,657.87	17.03	10.44	-159.05	165.86	274.36	939.11	917.22	21.89	42.902			
2,900.00	2,735.50	2,766.96	2,749.57	17.83	10.83	-159.20	164.46	285.67	977.27	954.54	22.73	42.994			
3,000.00	2,826.55	2,859.36	2,841.27	18.63	11.21	-159.34	163.06	296.97	1,015.43	991.86	23.57	43.078			
3,100.00	2,917.60	2,951.77	2,932.97	19.43	11.59	-159.46	161.65	308.27	1,053.60	1,029.19	24.41	43.157			
3,200.00	3,008.65	3,044.17	3,024.67	20.23	11.97	-159.58	160.25	319.57	1,091.78	1,066.52	25.26	43.229			
3,300.00	3,099.70	3,136.58	3,116.37	21.03	12.36	-159.69	158.85	330.87	1,129.95	1,103.86	26.10	43.296			
3,400.00	3,190.76	3,228.98	3,208.07	21.83	12.74	-159.79	157.44	342.18	1,168.14	1,141.19	26.94	43.359			
3,500.00	3,281.81	3,321.38	3,299.77	22.63	13.12	-159.89	156.04	353.48	1,206.32	1,178.54	27.78	43.417			
3,600.00	3,372.86	3,413.79	3,391.47	23.43	13.51	-159.98	154.64	364.78	1,244.51	1,215.88	28.63	43.472			
3,700.00	3,463.91	3,506.19	3,483.17	24.23	13.89	-160.06	153.24	376.08	1,282.70	1,253.22	29.47	43.523			
3,800.00	3,554.96	3,601.40	3,574.87	25.03	14.28	-160.14	151.83	387.38	1,320.89	1,290.56	30.33	43.554			
3,900.00	3,646.01	3,709.00	3,666.57	25.83	14.73	-160.22	150.43	398.69	1,359.08	1,327.85	31.23	43.512			
4,000.00	3,737.07	3,783.41	3,758.27	26.63	15.04	-160.29	149.03	409.99	1,397.28	1,365.27	32.01	43.658			
4,100.00	3,828.12	3,875.81	3,849.97	27.43	15.42	-160.36	147.63	421.29	1,435.47	1,402.62	32.85	43.698			
4,200.00	3,919.17	3,968.22	3,941.67	28.24	15.80	-160.42	146.22	432.59	1,473.67	1,439.98	33.69	43.736			
4,300.00	4,010.22	4,060.62	4,033.37	29.04	16.19	-160.48	144.82	443.89	1,511.87	1,477.33	34.54	43.771			
4,400.00	4,101.27	4,153.02	4,125.07	29.84	16.57	-160.54	143.42	455.20	1,550.07	1,514.69	35.39	43.805			
4,500.00	4,192.33	4,245.43	4,216.77	30.65	16.95	-160.60	142.01	466.50	1,588.28	1,552.05	36.23	43.837			
4,600.00	4,283.38	4,337.83	4,308.47	31.45	17.33	-160.65	140.61	477.80	1,626.48	1,589.40	37.08	43.867			
4,700.00	4,374.43	4,430.24	4,400.17	32.25	17.72	-160.70	139.21	489.10	1,664.69	1,626.76	37.92	43.896			
4,800.00	4,465.48	4,522.64	4,491.87	33.05	18.10	-160.75	137.81	500.40	1,702.89	1,664.12	38.77	43.923			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 2AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,615.05	4,583.57	33.86	18.48	-160.79	136.40	511.70	1,741.10	1,701.48	39.62	43.949			
5,000.00	4,647.58	4,707.45	4,675.27	34.66	18.87	-160.84	135.00	523.01	1,779.31	1,738.84	40.46	43.974			
5,100.00	4,738.64	4,800.14	4,766.97	35.47	19.25	-160.88	133.60	534.31	1,817.52	1,776.21	41.31	43.996			
5,200.00	4,829.69	4,907.74	4,858.67	36.27	19.70	-160.92	132.20	545.61	1,855.73	1,813.51	42.22	43.953			
5,300.00	4,920.74	4,984.67	4,950.37	37.07	20.02	-160.96	130.79	556.91	1,893.94	1,850.93	43.00	44.041			
5,400.00	5,011.79	5,077.07	5,042.07	37.88	20.40	-160.99	129.39	568.21	1,932.15	1,888.30	43.85	44.062			
5,500.00	5,102.84	5,169.47	5,133.77	38.68	20.78	-161.03	127.99	579.52	1,970.36	1,925.66	44.70	44.081			
5,600.00	5,193.89	5,261.88	5,225.47	39.48	21.17	-161.06	126.58	590.82	2,008.57	1,963.03	45.55	44.100			
5,700.00	5,284.95	5,354.28	5,317.17	40.29	21.55	-161.10	125.18	602.12	2,046.79	2,000.39	46.39	44.118			
5,800.00	5,376.00	5,446.69	5,408.87	41.09	21.93	-161.13	123.78	613.42	2,085.00	2,037.76	47.24	44.135			
5,900.00	5,467.05	5,539.09	5,500.57	41.90	22.31	-161.16	122.38	624.72	2,123.21	2,075.12	48.09	44.151			
6,000.00	5,558.10	5,631.50	5,592.27	42.70	22.70	-161.19	120.97	636.03	2,161.43	2,112.49	48.94	44.167			
6,100.00	5,649.15	5,723.90	5,683.97	43.51	23.08	-161.22	119.57	647.33	2,199.64	2,149.86	49.79	44.182			
6,200.00	5,740.21	5,816.31	5,775.67	44.31	23.46	-161.24	118.17	658.63	2,237.86	2,187.22	50.63	44.196			
6,300.00	5,831.26	5,908.71	5,867.37	45.11	23.85	-161.27	116.76	669.93	2,276.08	2,224.59	51.48	44.210			
6,400.00	5,922.31	6,001.12	5,959.07	45.92	24.23	-161.30	115.36	681.23	2,314.29	2,261.96	52.33	44.223			
6,500.00	6,013.36	6,106.48	6,050.77	46.72	24.67	-161.32	113.96	692.54	2,352.51	2,299.27	53.24	44.191			
6,600.00	6,104.41	6,185.92	6,142.47	47.53	25.00	-161.35	112.56	703.84	2,390.73	2,336.69	54.03	44.248			
6,700.00	6,195.46	6,278.33	6,234.17	48.33	25.38	-161.37	111.15	715.14	2,428.94	2,374.06	54.88	44.259			
6,800.00	6,286.52	6,370.73	6,325.87	49.14	25.76	-161.39	109.75	726.44	2,467.16	2,411.43	55.73	44.270			
6,900.00	6,377.57	6,463.14	6,417.57	49.94	26.15	-161.41	108.35	737.74	2,505.38	2,448.80	56.58	44.281			
7,000.00	6,468.62	6,555.54	6,509.27	50.75	26.53	-161.43	106.95	749.05	2,543.60	2,486.17	57.43	44.291			
7,100.00	6,559.67	6,647.95	6,600.97	51.55	26.91	-161.46	105.54	760.35	2,581.82	2,523.54	58.28	44.301			
7,200.00	6,650.72	6,740.35	6,692.67	52.36	27.30	-161.48	104.14	771.65	2,620.04	2,560.91	59.13	44.311			
7,300.00	6,741.77	6,832.76	6,784.37	53.16	27.68	-161.49	102.74	782.95	2,658.25	2,598.28	59.98	44.320			
7,400.00	6,832.83	6,925.16	6,876.07	53.97	28.06	-161.51	101.33	794.25	2,696.47	2,635.64	60.83	44.328			
7,500.00	6,923.88	7,017.57	6,967.77	54.77	28.45	-161.53	99.93	805.56	2,734.69	2,673.01	61.68	44.337			
7,600.00	7,014.93	7,109.97	7,059.47	55.58	28.83	-161.55	98.53	816.86	2,772.91	2,710.38	62.53	44.345			
7,700.00	7,105.98	7,202.37	7,151.17	56.38	29.21	-161.57	97.13	828.16	2,811.13	2,747.75	63.38	44.353			
7,800.00	7,197.03	7,295.48	7,243.58	57.19	29.60	-161.59	95.71	839.43	2,849.35	2,785.12	64.24	44.357			
7,900.00	7,288.09	7,392.50	7,340.45	57.99	29.91	-161.82	94.17	841.16	2,887.47	2,822.51	64.97	44.445			
7,982.08	7,362.82	7,467.85	7,415.08	58.65	30.06	-162.24	92.92	831.20	2,918.75	2,853.37	65.38	44.640			
8,000.00	7,379.16	7,483.64	7,430.51	58.79	30.09	-166.96	92.65	827.87	2,925.61	2,860.15	65.46	44.694			
8,050.00	7,424.95	7,527.09	7,472.44	59.18	30.16	179.35	91.92	816.54	2,944.85	2,879.21	65.63	44.868			
8,100.00	7,470.74	7,569.81	7,512.71	59.53	30.21	165.69	91.19	802.34	2,964.12	2,898.35	65.77	45.068			
8,150.00	7,516.17	7,611.94	7,551.28	59.84	30.25	152.97	90.48	785.43	2,983.28	2,917.41	65.87	45.289			
8,200.00	7,560.91	7,653.60	7,588.10	60.13	30.28	141.76	89.78	765.97	3,002.15	2,936.21	65.94	45.525			
8,250.00	7,604.61	7,694.90	7,623.11	60.38	30.30	132.20	89.09	744.08	3,020.60	2,954.60	66.00	45.770			
8,300.00	7,646.94	7,735.95	7,656.25	60.60	30.32	124.17	88.42	719.89	3,038.46	2,972.43	66.03	46.016			
8,350.00	7,687.58	7,776.80	7,687.43	60.78	30.35	117.45	87.77	693.51	3,055.61	2,989.55	66.06	46.256			
8,400.00	7,726.22	7,817.54	7,716.58	60.94	30.37	111.81	87.14	665.07	3,071.89	3,005.81	66.08	46.484			
8,450.00	7,762.57	7,858.21	7,743.58	61.07	30.40	107.07	86.53	634.68	3,087.19	3,021.07	66.12	46.693			
8,500.00	7,796.34	7,898.85	7,768.35	61.18	30.45	103.08	85.95	602.47	3,101.39	3,035.22	66.17	46.873			
8,550.00	7,827.28	7,939.50	7,790.77	61.26	30.51	99.72	85.40	568.58	3,114.37	3,048.13	66.24	47.013			
8,600.00	7,855.16	7,980.17	7,810.75	61.31	30.58	96.91	84.87	533.17	3,126.05	3,059.69	66.36	47.109			
8,650.00	7,879.76	8,020.87	7,828.18	61.35	30.68	94.57	84.38	496.40	3,136.32	3,069.80	66.52	47.151			
8,700.00	7,900.90	8,061.61	7,842.96	61.37	30.80	92.66	83.93	458.45	3,145.11	3,078.38	66.73	47.134			
8,750.00	7,918.42	8,102.38	7,855.02	61.37	30.95	91.15	83.51	419.52	3,152.36	3,085.36	67.00	47.052			
8,800.00	7,932.18	8,143.17	7,864.29	61.35	31.12	90.00	83.14	379.80	3,158.01	3,090.67	67.34	46.899			
8,850.00	7,942.07	8,183.97	7,870.71	61.31	31.32	89.19	82.80	339.52	3,162.02	3,094.27	67.74	46.676			
8,900.00	7,948.03	8,224.76	7,874.25	61.26	31.55	88.71	82.51	298.90	3,164.35	3,096.14	68.22	46.387			
8,949.68	7,950.00	8,267.78	7,875.00	61.20	31.81	88.56	82.25	255.89	3,165.00	3,096.24	68.76	46.031			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 2AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,000.00	7,950.00	8,318.10	7,875.00	61.14	32.18	88.56	81.96	205.57	3,164.77	3,095.34	69.43	45.581			
9,100.00	7,950.00	8,418.10	7,875.00	61.03	33.04	88.56	81.39	105.57	3,164.31	3,093.27	71.04	44.542			
9,200.00	7,950.00	8,518.10	7,875.00	60.93	34.10	88.56	80.81	5.58	3,163.85	3,090.84	73.01	43.333			
9,300.00	7,950.00	8,618.10	7,875.00	60.85	35.34	88.56	80.24	-94.42	3,163.40	3,088.08	75.32	42.000			
9,400.00	7,950.00	8,718.10	7,875.00	60.80	36.73	88.56	79.66	-194.42	3,162.94	3,085.01	77.93	40.587			
9,500.00	7,950.00	8,818.09	7,875.00	60.77	38.26	88.56	79.09	-294.41	3,162.48	3,081.67	80.81	39.133			
9,600.00	7,950.00	8,918.09	7,875.00	60.76	39.91	88.56	78.51	-394.41	3,162.03	3,078.08	83.95	37.668			
9,700.00	7,950.00	9,018.09	7,875.00	60.79	41.68	88.56	77.94	-494.41	3,161.57	3,074.27	87.30	36.217			
9,800.00	7,950.00	9,118.09	7,875.00	60.86	43.54	88.56	77.36	-594.41	3,161.11	3,070.27	90.84	34.798			
9,900.00	7,950.00	9,218.09	7,875.00	60.99	45.48	88.56	76.79	-694.40	3,160.66	3,066.10	94.56	33.425			
10,000.00	7,950.00	9,318.09	7,875.00	61.21	47.49	88.56	76.21	-794.40	3,160.20	3,061.77	98.43	32.106			
10,100.00	7,950.00	9,418.09	7,875.00	61.56	49.57	88.56	75.64	-894.40	3,159.74	3,057.30	102.44	30.845			
10,200.00	7,950.00	9,518.09	7,875.00	62.08	51.71	88.56	75.06	-994.40	3,159.28	3,052.72	106.57	29.646			
10,300.00	7,950.00	9,618.09	7,875.00	62.87	53.90	88.56	74.49	-1,094.39	3,158.83	3,048.03	110.80	28.509			
10,400.00	7,950.00	9,718.09	7,875.00	63.95	56.13	88.56	73.92	-1,194.39	3,158.37	3,043.24	115.13	27.432			
10,500.00	7,950.00	9,818.08	7,875.00	65.35	58.40	88.56	73.34	-1,294.39	3,157.91	3,038.36	119.55	26.415			
10,600.00	7,950.00	9,918.08	7,875.00	67.00	60.70	88.56	72.77	-1,394.39	3,157.46	3,033.41	124.04	25.455			
10,700.00	7,950.00	10,018.08	7,875.00	68.85	63.04	88.56	72.19	-1,494.38	3,157.00	3,028.40	128.60	24.548			
10,800.00	7,950.00	10,118.08	7,875.00	70.83	65.40	88.56	71.62	-1,594.38	3,156.54	3,023.32	133.23	23.693			
10,900.00	7,950.00	10,218.08	7,875.00	72.91	67.78	88.56	71.04	-1,694.38	3,156.09	3,018.19	137.90	22.886			
11,000.00	7,950.00	10,318.08	7,875.00	75.07	70.19	88.56	70.47	-1,794.37	3,155.63	3,013.00	142.63	22.125			
11,100.00	7,950.00	10,418.08	7,875.00	77.28	72.62	88.56	69.89	-1,894.37	3,155.17	3,007.77	147.40	21.406			
11,200.00	7,950.00	10,518.08	7,875.00	79.54	75.07	88.56	69.32	-1,994.37	3,154.72	3,002.51	152.21	20.726			
11,300.00	7,950.00	10,618.08	7,875.00	81.83	77.53	88.56	68.74	-2,094.37	3,154.26	2,997.20	157.06	20.083			
11,400.00	7,950.00	10,718.07	7,875.00	84.16	80.01	88.56	68.17	-2,194.36	3,153.80	2,991.86	161.94	19.475			
11,500.00	7,950.00	10,818.07	7,875.00	86.51	82.50	88.56	67.59	-2,294.36	3,153.35	2,986.49	166.86	18.899			
11,600.00	7,950.00	10,918.07	7,875.00	88.89	85.00	88.56	67.02	-2,394.36	3,152.89	2,981.09	171.80	18.352			
11,700.00	7,950.00	11,018.07	7,875.00	91.29	87.52	88.55	66.44	-2,494.36	3,152.43	2,975.67	176.76	17.834			
11,800.00	7,950.00	11,118.07	7,875.00	93.71	90.04	88.55	65.87	-2,594.35	3,151.98	2,970.22	181.75	17.342			
11,900.00	7,950.00	11,218.07	7,875.00	96.14	92.57	88.55	65.29	-2,694.35	3,151.52	2,964.75	186.77	16.874			
12,000.00	7,950.00	11,318.07	7,875.00	98.59	95.12	88.55	64.72	-2,794.35	3,151.06	2,959.26	191.80	16.429			
12,100.00	7,950.00	11,418.07	7,875.00	101.05	97.67	88.55	64.14	-2,894.34	3,150.61	2,953.76	196.85	16.005			
12,200.00	7,950.00	11,518.07	7,875.00	103.52	100.22	88.55	63.57	-2,994.34	3,150.15	2,948.23	201.92	15.601			
12,300.00	7,950.00	11,618.07	7,875.00	106.01	102.79	88.55	62.99	-3,094.34	3,149.69	2,942.69	207.00	15.216			
12,400.00	7,950.00	11,718.06	7,875.00	108.50	105.36	88.55	62.42	-3,194.34	3,149.24	2,937.14	212.10	14.848			
12,500.00	7,950.00	11,818.06	7,875.00	111.01	107.94	88.55	61.84	-3,294.33	3,148.78	2,931.57	217.21	14.496			
12,600.00	7,950.00	11,918.06	7,875.00	113.52	110.52	88.55	61.27	-3,394.33	3,148.32	2,925.99	222.34	14.160			
12,700.00	7,950.00	12,018.06	7,875.00	116.04	113.11	88.55	60.69	-3,494.33	3,147.86	2,920.39	227.47	13.838			
12,800.00	7,950.00	12,118.06	7,875.00	118.57	115.70	88.55	60.12	-3,594.33	3,147.41	2,914.79	232.62	13.530			
12,900.00	7,950.00	12,218.06	7,875.00	121.11	118.29	88.55	59.54	-3,694.32	3,146.95	2,909.17	237.78	13.235			
13,000.00	7,950.00	12,318.06	7,875.00	123.65	120.89	88.55	58.97	-3,794.32	3,146.49	2,903.55	242.95	12.951			
13,100.00	7,950.00	12,418.06	7,875.00	126.20	123.50	88.55	58.39	-3,894.32	3,146.04	2,897.92	248.12	12.679			
13,200.00	7,950.00	12,518.06	7,875.00	128.75	126.11	88.55	57.82	-3,994.31	3,145.58	2,892.27	253.31	12.418			
13,300.00	7,950.00	12,618.05	7,875.00	131.31	128.72	88.55	57.25	-4,094.31	3,145.12	2,886.62	258.50	12.167			
13,400.00	7,950.00	12,718.05	7,875.00	133.88	131.33	88.55	56.67	-4,194.31	3,144.67	2,880.97	263.70	11.925			
13,500.00	7,950.00	12,818.05	7,875.00	136.45	133.95	88.55	56.10	-4,294.31	3,144.21	2,875.30	268.91	11.692			
13,600.00	7,950.00	12,918.05	7,875.00	139.02	136.57	88.55	55.52	-4,394.30	3,143.75	2,869.63	274.12	11.468			
13,700.00	7,950.00	13,018.05	7,875.00	141.60	139.20	88.55	54.95	-4,494.30	3,143.30	2,863.95	279.35	11.252			
13,800.00	7,950.00	13,118.05	7,875.00	144.19	141.82	88.55	54.37	-4,594.30	3,142.84	2,858.27	284.57	11.044			
13,900.00	7,950.00	13,218.05	7,875.00	146.77	144.45	88.55	53.80	-4,694.30	3,142.38	2,852.58	289.81	10.843			
14,000.00	7,950.00	13,318.05	7,875.00	149.36	147.08	88.55	53.22	-4,794.29	3,141.93	2,846.88	295.04	10.649			
14,100.00	7,950.00	13,418.05	7,875.00	151.96	149.71	88.55	52.65	-4,894.29	3,141.47	2,841.18	300.29	10.462			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 2AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,200.00	7,950.00	13,518.05	7,875.00	154.56	152.35	88.55	52.07	-4,994.29	3,141.01	2,835.48	305.54	10.280			
14,300.00	7,950.00	13,618.04	7,875.00	157.16	154.99	88.55	51.50	-5,094.29	3,140.56	2,829.77	310.79	10.105			
14,400.00	7,950.00	13,718.04	7,875.00	159.76	157.62	88.55	50.92	-5,194.28	3,140.10	2,824.05	316.05	9.936			
14,500.00	7,950.00	13,818.04	7,875.00	162.37	160.26	88.55	50.35	-5,294.28	3,139.64	2,818.34	321.31	9.771			
14,600.00	7,950.00	13,918.04	7,875.00	164.98	162.91	88.55	49.77	-5,394.28	3,139.19	2,812.61	326.57	9.613			
14,700.00	7,950.00	14,018.04	7,875.00	167.59	165.55	88.55	49.20	-5,494.27	3,138.73	2,806.89	331.84	9.459			
14,800.00	7,950.00	14,118.04	7,875.00	170.20	168.19	88.55	48.62	-5,594.27	3,138.27	2,801.16	337.11	9.309			
14,900.00	7,950.00	14,218.04	7,875.00	172.82	170.84	88.55	48.05	-5,694.27	3,137.82	2,795.43	342.39	9.164			
15,000.00	7,950.00	14,318.04	7,875.00	175.44	173.49	88.55	47.47	-5,794.27	3,137.36	2,789.69	347.67	9.024			
15,100.00	7,950.00	14,418.04	7,875.00	178.06	176.14	88.55	46.90	-5,894.26	3,136.90	2,783.95	352.95	8.888			
15,200.00	7,950.00	14,518.04	7,875.00	180.68	178.79	88.55	46.32	-5,994.26	3,136.44	2,778.21	358.23	8.755			
15,300.00	7,950.00	14,618.03	7,875.00	183.31	181.44	88.55	45.75	-6,094.26	3,135.99	2,772.46	363.52	8.627			
15,400.00	7,950.00	14,718.03	7,875.00	185.93	184.09	88.55	45.17	-6,194.26	3,135.53	2,766.72	368.81	8.502			
15,500.00	7,950.00	14,818.03	7,875.00	188.56	186.75	88.55	44.60	-6,294.25	3,135.07	2,761.00	374.11	8.380			
15,600.00	7,950.00	14,918.03	7,875.00	191.19	189.40	88.55	44.02	-6,394.25	3,134.62	2,755.21	379.40	8.262			
15,700.00	7,950.00	15,018.03	7,875.00	193.82	192.06	88.55	43.45	-6,494.25	3,134.16	2,749.46	384.70	8.147			
15,800.00	7,950.00	15,118.03	7,875.00	196.46	194.72	88.55	42.87	-6,594.24	3,133.70	2,743.70	390.00	8.035			
15,900.00	7,950.00	15,218.03	7,875.00	199.09	197.37	88.55	42.30	-6,694.24	3,133.25	2,737.94	395.30	7.926			
16,000.00	7,950.00	15,318.03	7,875.00	201.73	200.03	88.55	41.73	-6,794.24	3,132.79	2,732.18	400.61	7.820			
16,100.00	7,950.00	15,418.03	7,875.00	204.37	202.69	88.55	41.15	-6,894.24	3,132.33	2,726.42	405.92	7.717			
16,200.00	7,950.00	15,518.02	7,875.00	207.01	205.35	88.55	40.58	-6,994.23	3,131.88	2,720.65	411.22	7.616			
16,300.00	7,950.00	15,618.02	7,875.00	209.65	208.01	88.55	40.00	-7,094.23	3,131.42	2,714.88	416.54	7.518			
16,400.00	7,950.00	15,718.02	7,875.00	212.29	210.68	88.55	39.43	-7,194.23	3,130.96	2,709.11	421.85	7.422			
16,500.00	7,950.00	15,818.02	7,875.00	214.93	213.34	88.54	38.85	-7,294.23	3,130.51	2,703.34	427.16	7.329			
16,600.00	7,950.00	15,918.02	7,875.00	217.58	216.00	88.54	38.28	-7,394.22	3,130.05	2,697.57	432.48	7.237			
16,700.00	7,950.00	16,018.02	7,875.00	220.22	218.67	88.54	37.70	-7,494.22	3,129.59	2,691.80	437.80	7.149			
16,800.00	7,950.00	16,118.02	7,875.00	222.87	221.33	88.54	37.13	-7,594.22	3,129.14	2,686.02	443.11	7.062			
16,900.00	7,950.00	16,218.02	7,875.00	225.52	224.00	88.54	36.55	-7,694.22	3,128.68	2,680.24	448.44	6.977			
17,000.00	7,950.00	16,318.02	7,875.00	228.16	226.66	88.54	35.98	-7,794.21	3,128.22	2,674.46	453.76	6.894			
17,100.00	7,950.00	16,418.02	7,875.00	230.81	229.33	88.54	35.40	-7,894.21	3,127.77	2,668.68	459.08	6.813			
17,200.00	7,950.00	16,518.01	7,875.00	233.46	232.00	88.54	34.83	-7,994.21	3,127.31	2,662.90	464.41	6.734			
17,300.00	7,950.00	16,618.01	7,875.00	236.12	234.66	88.54	34.25	-8,094.20	3,126.85	2,657.12	469.73	6.657			
17,400.00	7,950.00	16,718.01	7,875.00	238.77	237.33	88.54	33.68	-8,194.20	3,126.39	2,651.34	475.06	6.581			
17,500.00	7,950.00	16,818.01	7,875.00	241.42	240.00	88.54	33.10	-8,294.20	3,125.94	2,645.55	480.39	6.507			
17,600.00	7,950.00	16,918.01	7,875.00	244.08	242.67	88.54	32.53	-8,394.20	3,125.48	2,639.76	485.72	6.435			
17,700.00	7,950.00	17,018.01	7,875.00	246.73	245.34	88.54	31.95	-8,494.19	3,125.02	2,633.98	491.05	6.364			
17,800.00	7,950.00	17,118.01	7,875.00	249.39	248.01	88.54	31.38	-8,594.19	3,124.57	2,628.19	496.38	6.295			
17,900.00	7,950.00	17,218.01	7,875.00	252.04	250.68	88.54	30.80	-8,694.19	3,124.11	2,622.40	501.71	6.227			
18,000.00	7,950.00	17,318.01	7,875.00	254.70	253.35	88.54	30.23	-8,794.19	3,123.65	2,616.61	507.05	6.160			
18,100.00	7,950.00	17,418.00	7,875.00	257.36	256.02	88.54	29.65	-8,894.18	3,123.20	2,610.81	512.38	6.095			
18,200.00	7,950.00	17,518.00	7,875.00	260.02	258.70	88.54	29.08	-8,994.18	3,122.74	2,605.02	517.72	6.032			
18,300.00	7,950.00	17,618.00	7,875.00	262.67	261.37	88.54	28.50	-9,094.18	3,122.28	2,599.23	523.06	5.969			
18,400.00	7,950.00	17,718.00	7,875.00	265.33	264.04	88.54	27.93	-9,194.17	3,121.83	2,593.43	528.39	5.908			
18,500.00	7,950.00	17,818.00	7,875.00	267.99	266.71	88.54	27.35	-9,294.17	3,121.37	2,587.64	533.73	5.848			
18,600.00	7,950.00	17,918.00	7,875.00	270.66	269.39	88.54	26.78	-9,394.17	3,120.91	2,581.84	539.07	5.789			
18,700.00	7,950.00	18,018.00	7,875.00	273.32	272.06	88.54	26.20	-9,494.17	3,120.46	2,576.04	544.41	5.732			
18,800.00	7,950.00	18,118.00	7,875.00	275.98	274.73	88.54	25.63	-9,594.16	3,120.00	2,570.25	549.75	5.675			
18,838.38	7,950.00	18,142.12	7,875.00	277.00	275.38	88.54	25.49	-9,618.29	3,119.86	2,568.53	551.33	5.659			
18,847.73	7,950.00	18,142.12	7,875.00	277.25	275.38	88.54	25.49	-9,618.29	3,119.87	2,568.36	551.52	5.657 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.10	0.10	0.00	0.00	-0.11	150.08	-0.28	150.08					
100.00	100.00	100.10	100.10	0.13	0.13	-0.11	150.08	-0.28	150.08	149.81	0.27	557.472		
200.00	200.00	200.10	200.10	0.49	0.49	-0.11	150.08	-0.28	150.08	149.09	0.99	152.185		
250.00	250.00	250.10	250.10	0.67	0.67	-0.11	150.08	-0.28	150.08	148.73	1.34	111.614		
250.21	250.21	250.32	250.32	0.67	0.67	-0.11	150.08	-0.28	150.08	148.73	1.35	111.493	CC	
300.00	300.00	301.80	301.79	0.84	0.85	-163.41	149.79	0.08	150.21	148.52	1.69	88.649	ES	
400.00	399.93	405.15	405.07	1.19	1.21	-162.69	147.45	3.00	151.31	148.92	2.39	63.339		
500.00	499.68	508.39	508.04	1.54	1.58	-161.28	142.80	8.81	153.58	150.47	3.11	49.440		
600.00	599.13	611.44	610.49	1.92	1.97	-159.26	135.85	17.50	157.14	153.29	3.85	40.838		
700.00	698.15	713.71	711.70	2.32	2.38	-156.74	126.72	28.92	162.18	157.56	4.61	35.145		
800.00	796.63	813.21	809.99	2.74	2.80	-154.55	117.07	40.98	170.02	164.62	5.40	31.472		
900.00	894.44	912.48	908.06	3.20	3.23	-153.02	107.44	53.02	181.17	174.96	6.21	29.174		
1,000.00	991.46	1,011.42	1,005.80	3.70	3.65	-152.11	97.85	65.01	195.47	188.44	7.03	27.794		
1,100.00	1,087.58	1,109.89	1,103.07	4.24	4.08	-151.73	88.30	76.95	212.84	204.97	7.87	27.048		
1,200.00	1,182.68	1,207.78	1,199.78	4.83	4.51	-151.77	78.80	88.82	233.23	224.52	8.71	26.764		
1,300.00	1,276.65	1,304.97	1,295.79	5.46	4.94	-152.12	69.38	100.60	256.63	247.07	9.57	26.828		
1,400.00	1,369.36	1,401.34	1,390.99	6.14	5.36	-152.67	60.03	112.28	283.06	272.64	10.42	27.164		
1,471.15	1,434.50	1,469.34	1,458.16	6.66	5.66	-153.16	53.44	120.53	303.72	292.69	11.03	27.534		
1,500.00	1,460.77	1,503.19	1,485.30	6.87	5.81	-153.44	50.78	123.86	312.41	301.11	11.30	27.635		
1,600.00	1,551.82	1,607.96	1,579.37	7.62	6.28	-154.30	41.54	135.40	342.59	330.39	12.20	28.092		
1,700.00	1,642.88	1,687.26	1,673.44	8.38	6.63	-155.02	32.31	146.95	372.82	359.84	12.98	28.720		
1,800.00	1,733.93	1,782.48	1,767.51	9.15	7.05	-155.64	23.07	158.49	403.10	389.26	13.84	29.131		
1,900.00	1,824.98	1,877.71	1,861.58	9.93	7.47	-156.16	13.84	170.04	433.42	418.72	14.70	29.492		
2,000.00	1,916.03	1,972.93	1,955.65	10.71	7.90	-156.62	4.60	181.58	463.76	448.21	15.56	29.812		
2,100.00	2,007.08	2,068.15	2,049.72	11.49	8.32	-157.03	-4.63	193.12	494.13	477.71	16.42	30.097		
2,200.00	2,098.13	2,163.37	2,143.78	12.28	8.75	-157.38	-13.86	204.67	524.52	507.24	17.28	30.353		
2,300.00	2,189.19	2,258.60	2,237.85	13.07	9.17	-157.70	-23.10	216.21	554.92	536.78	18.14	30.583		
2,400.00	2,280.24	2,353.82	2,331.92	13.86	9.60	-157.99	-32.33	227.76	585.34	566.33	19.01	30.792		
2,500.00	2,371.29	2,449.04	2,425.99	14.65	10.02	-158.24	-41.57	239.30	615.77	595.90	19.88	30.982		
2,600.00	2,462.34	2,544.27	2,520.06	15.44	10.44	-158.47	-50.80	250.84	646.21	625.47	20.74	31.155		
2,700.00	2,553.39	2,639.49	2,614.13	16.24	10.87	-158.69	-60.04	262.39	676.66	655.06	21.61	31.314		
2,800.00	2,644.45	2,734.71	2,708.19	17.03	11.29	-158.88	-69.27	273.93	707.12	684.65	22.48	31.460		
2,900.00	2,735.50	2,829.93	2,802.26	17.83	11.72	-159.06	-78.51	285.48	737.59	714.24	23.35	31.595		
3,000.00	2,826.55	2,925.16	2,896.33	18.63	12.14	-159.22	-87.74	297.02	768.06	743.84	24.21	31.720		
3,100.00	2,917.60	3,020.38	2,990.40	19.43	12.57	-159.37	-96.97	308.56	798.53	773.45	25.08	31.835		
3,200.00	3,008.65	3,115.60	3,084.47	20.23	13.00	-159.51	-106.21	320.11	829.01	803.06	25.95	31.943		
3,300.00	3,099.70	3,210.83	3,178.54	21.03	13.42	-159.64	-115.44	331.65	859.49	832.67	26.82	32.044		
3,400.00	3,190.76	3,306.05	3,272.61	21.83	13.85	-159.76	-124.68	343.20	889.98	862.29	27.69	32.138		
3,500.00	3,281.81	3,401.27	3,366.67	22.63	14.27	-159.87	-133.91	354.74	920.47	891.91	28.56	32.226		
3,600.00	3,372.86	3,503.50	3,460.74	23.43	14.73	-159.98	-143.15	366.28	950.97	921.50	29.46	32.276		
3,700.00	3,463.91	3,608.28	3,554.81	24.23	15.20	-160.08	-152.38	377.83	981.46	951.09	30.37	32.312		
3,800.00	3,554.96	3,686.94	3,648.88	25.03	15.55	-160.17	-161.61	389.37	1,011.96	980.79	31.18	32.460		
3,900.00	3,646.01	3,782.16	3,742.95	25.83	15.97	-160.26	-170.85	400.92	1,042.47	1,010.42	32.05	32.529		
4,000.00	3,737.07	3,877.39	3,837.02	26.63	16.40	-160.34	-180.08	412.46	1,072.97	1,040.05	32.92	32.594		
4,100.00	3,828.12	3,972.61	3,931.08	27.43	16.83	-160.42	-189.32	424.01	1,103.47	1,069.68	33.79	32.656		
4,200.00	3,919.17	4,067.83	4,025.15	28.24	17.25	-160.49	-198.55	435.55	1,133.98	1,099.32	34.66	32.714		
4,300.00	4,010.22	4,163.06	4,119.22	29.04	17.68	-160.56	-207.79	447.09	1,164.49	1,128.96	35.54	32.770		
4,400.00	4,101.27	4,258.28	4,213.29	29.84	18.10	-160.63	-217.02	458.64	1,195.00	1,158.59	36.41	32.823		
4,500.00	4,192.33	4,353.50	4,307.36	30.65	18.53	-160.69	-226.26	470.18	1,225.51	1,188.23	37.28	32.873		
4,600.00	4,283.38	4,448.73	4,401.43	31.45	18.96	-160.75	-235.49	481.73	1,256.03	1,217.87	38.15	32.921		
4,700.00	4,374.43	4,543.95	4,495.50	32.25	19.38	-160.81	-244.72	493.27	1,286.54	1,247.52	39.03	32.966		
4,800.00	4,465.48	4,639.17	4,589.56	33.05	19.81	-160.86	-253.96	504.81	1,317.06	1,277.16	39.90	33.010		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 2BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,734.39	4,683.63	33.86	20.23	-160.92	-263.19	516.36	1,347.57	1,306.80	40.77	33.051			
5,000.00	4,647.58	4,829.62	4,777.70	34.66	20.66	-160.97	-272.43	527.90	1,378.09	1,336.45	41.65	33.091			
5,100.00	4,738.64	4,924.84	4,871.77	35.47	21.09	-161.01	-281.66	539.45	1,408.61	1,366.09	42.52	33.129			
5,200.00	4,829.69	5,020.06	4,965.84	36.27	21.51	-161.06	-290.90	550.99	1,439.13	1,395.74	43.39	33.165			
5,300.00	4,920.74	5,115.29	5,059.91	37.07	21.94	-161.10	-300.13	562.53	1,469.65	1,425.38	44.27	33.200			
5,400.00	5,011.79	5,210.51	5,153.97	37.88	22.36	-161.14	-309.36	574.08	1,500.17	1,455.03	45.14	33.234			
5,500.00	5,102.84	5,305.73	5,248.04	38.68	22.79	-161.18	-318.60	585.62	1,530.69	1,484.68	46.01	33.266			
5,600.00	5,193.89	5,400.96	5,342.11	39.48	23.22	-161.22	-327.83	597.17	1,561.21	1,514.32	46.89	33.297			
5,700.00	5,284.95	5,503.82	5,436.18	40.29	23.68	-161.26	-337.07	608.71	1,591.73	1,543.94	47.79	33.304			
5,800.00	5,376.00	5,608.60	5,530.25	41.09	24.15	-161.30	-346.30	620.25	1,622.26	1,573.55	48.71	33.305			
5,900.00	5,467.05	5,686.62	5,624.32	41.90	24.49	-161.33	-355.54	631.80	1,652.78	1,603.27	49.51	33.382			
6,000.00	5,558.10	5,781.85	5,718.39	42.70	24.92	-161.36	-364.77	643.34	1,683.31	1,632.92	50.39	33.409			
6,100.00	5,649.15	5,877.07	5,812.45	43.51	25.35	-161.40	-374.01	654.89	1,713.83	1,662.57	51.26	33.434			
6,200.00	5,740.21	5,972.29	5,906.52	44.31	25.77	-161.43	-383.24	666.43	1,744.36	1,692.22	52.13	33.459			
6,300.00	5,831.26	6,067.52	6,000.59	45.11	26.20	-161.46	-392.47	677.97	1,774.88	1,721.87	53.01	33.482			
6,400.00	5,922.31	6,162.74	6,094.66	45.92	26.63	-161.49	-401.71	689.52	1,805.41	1,751.52	53.88	33.505			
6,500.00	6,013.36	6,257.96	6,188.73	46.72	27.05	-161.51	-410.94	701.06	1,835.94	1,781.18	54.76	33.527			
6,600.00	6,104.41	6,353.18	6,282.80	47.53	27.48	-161.54	-420.18	712.61	1,866.46	1,810.83	55.63	33.549			
6,700.00	6,195.46	6,448.41	6,376.86	48.33	27.90	-161.57	-429.41	724.15	1,896.99	1,840.48	56.51	33.569			
6,800.00	6,286.52	6,543.63	6,470.93	49.14	28.33	-161.59	-438.65	735.70	1,927.52	1,870.13	57.39	33.589			
6,900.00	6,377.57	6,638.85	6,565.00	49.94	28.76	-161.62	-447.88	747.24	1,958.05	1,899.78	58.26	33.608			
7,000.00	6,468.62	6,734.08	6,659.07	50.75	29.18	-161.64	-457.11	758.78	1,988.57	1,929.44	59.14	33.627			
7,100.00	6,559.67	6,829.30	6,753.14	51.55	29.61	-161.66	-466.35	770.33	2,019.10	1,959.09	60.01	33.645			
7,200.00	6,650.72	6,924.52	6,847.21	52.36	30.03	-161.69	-475.58	781.87	2,049.63	1,988.74	60.89	33.662			
7,300.00	6,741.77	7,019.75	6,941.28	53.16	30.46	-161.71	-484.82	793.42	2,080.16	2,018.40	61.76	33.679			
7,400.00	6,832.83	7,114.97	7,035.34	53.97	30.89	-161.73	-494.05	804.96	2,110.69	2,048.05	62.64	33.696			
7,500.00	6,923.88	7,210.19	7,129.41	54.77	31.31	-161.75	-503.29	816.50	2,141.22	2,077.70	63.52	33.712			
7,600.00	7,014.93	7,305.41	7,223.48	55.58	31.74	-161.77	-512.52	828.05	2,171.75	2,107.36	64.39	33.727			
7,700.00	7,105.98	7,401.17	7,318.08	56.38	32.17	-161.79	-521.81	839.61	2,202.28	2,137.01	65.27	33.740			
7,800.00	7,197.03	7,502.80	7,419.06	57.19	32.53	-162.08	-531.78	841.68	2,232.64	2,166.63	66.01	33.821			
7,900.00	7,288.09	7,597.96	7,512.56	57.99	32.75	-162.78	-541.11	827.35	2,262.95	2,196.51	66.43	34.063			
7,982.08	7,362.82	7,668.38	7,579.54	58.65	32.85	-163.53	-547.85	806.83	2,288.13	2,221.52	66.61	34.352			
8,000.00	7,379.16	7,682.83	7,592.95	58.79	32.87	-168.17	-549.20	801.61	2,293.71	2,227.07	66.63	34.423			
8,050.00	7,424.95	7,722.48	7,629.01	59.18	32.90	178.39	-552.86	785.55	2,309.44	2,242.75	66.68	34.633			
8,100.00	7,470.74	7,761.28	7,663.14	59.53	32.93	164.97	-556.34	767.44	2,325.30	2,258.59	66.71	34.855			
8,150.00	7,516.17	7,799.38	7,695.39	59.84	32.95	152.50	-559.64	747.45	2,341.16	2,274.43	66.73	35.084			
8,200.00	7,560.91	7,836.88	7,725.78	60.13	32.95	141.53	-562.77	725.70	2,356.85	2,290.12	66.74	35.316			
8,250.00	7,604.61	7,873.90	7,754.32	60.38	32.95	132.20	-565.73	702.32	2,372.25	2,305.52	66.74	35.547			
8,300.00	7,646.94	7,910.53	7,781.02	60.60	32.95	124.38	-568.51	677.41	2,387.22	2,320.48	66.74	35.771			
8,350.00	7,687.58	7,946.82	7,805.86	60.78	32.94	117.85	-571.12	651.09	2,401.61	2,334.87	66.74	35.984			
8,400.00	7,726.22	7,982.84	7,828.83	60.94	32.92	112.39	-573.55	623.45	2,415.32	2,348.56	66.76	36.179			
8,450.00	7,762.57	8,018.65	7,849.90	61.07	32.91	107.81	-575.80	594.60	2,428.23	2,361.43	66.80	36.353			
8,500.00	7,796.34	8,054.28	7,869.05	61.18	32.89	103.96	-577.86	564.62	2,440.22	2,373.37	66.85	36.500			
8,550.00	7,827.28	8,089.77	7,886.24	61.26	32.88	100.72	-579.74	533.64	2,451.21	2,384.26	66.95	36.613			
8,600.00	7,855.16	8,125.15	7,901.44	61.31	32.87	98.02	-581.43	501.75	2,461.09	2,394.01	67.08	36.687			
8,650.00	7,879.76	8,160.43	7,914.62	61.35	32.87	95.77	-582.92	469.06	2,469.79	2,402.53	67.26	36.720			
8,700.00	7,900.90	8,195.65	7,925.75	61.37	32.87	93.94	-584.21	435.68	2,477.25	2,409.76	67.49	36.704			
8,750.00	7,918.42	8,230.80	7,934.81	61.37	32.88	92.48	-585.30	401.74	2,483.40	2,415.61	67.79	36.634			
8,800.00	7,932.18	8,265.90	7,941.78	61.35	32.91	91.38	-586.19	367.35	2,488.19	2,420.05	68.14	36.514			
8,850.00	7,942.07	8,300.00	7,946.52	61.31	32.94	90.60	-586.85	333.60	2,491.59	2,423.04	68.56	36.343			
8,900.00	7,948.03	8,336.01	7,949.35	61.26	33.00	90.14	-587.34	297.71	2,493.58	2,424.53	69.04	36.116			
8,949.68	7,950.00	8,373.98	7,950.00	61.20	33.09	90.00	-587.62	259.74	2,494.12	2,424.53	69.59	35.842			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 2BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,000.00	7,950.00	8,424.30	7,950.00	61.14	33.26	90.00	-587.91	209.43	2,493.89	2,423.63	70.26	35.496			
9,100.00	7,950.00	8,524.30	7,950.00	61.03	33.81	90.00	-588.48	109.43	2,493.43	2,421.58	71.85	34.702			
9,200.00	7,950.00	8,624.30	7,950.00	60.93	34.67	90.00	-589.06	9.43	2,492.97	2,419.17	73.81	33.777			
9,300.00	7,950.00	8,724.30	7,950.00	60.85	35.79	90.00	-589.63	-90.57	2,492.52	2,416.42	76.09	32.757			
9,400.00	7,950.00	8,824.30	7,950.00	60.80	37.12	90.00	-590.21	-190.56	2,492.06	2,413.38	78.68	31.673			
9,500.00	7,950.00	8,924.30	7,950.00	60.77	38.62	90.00	-590.78	-290.56	2,491.60	2,410.06	81.54	30.556			
9,600.00	7,950.00	9,024.30	7,950.00	60.76	40.25	90.00	-591.36	-390.56	2,491.15	2,406.49	84.65	29.429			
9,700.00	7,950.00	9,124.30	7,950.00	60.79	42.00	90.00	-591.93	-490.56	2,490.69	2,402.71	87.98	28.310			
9,800.00	7,950.00	9,224.29	7,950.00	60.86	43.85	90.00	-592.51	-590.55	2,490.23	2,398.73	91.50	27.215			
9,900.00	7,950.00	9,324.29	7,950.00	60.99	45.78	90.00	-593.08	-690.55	2,489.77	2,394.58	95.20	26.154			
10,000.00	7,950.00	9,424.29	7,950.00	61.21	47.79	90.00	-593.65	-790.55	2,489.32	2,390.27	99.05	25.132			
10,100.00	7,950.00	9,524.29	7,950.00	61.56	49.86	90.00	-594.23	-890.54	2,488.86	2,385.82	103.04	24.155			
10,200.00	7,950.00	9,624.29	7,950.00	62.08	51.99	90.00	-594.80	-990.54	2,488.40	2,381.26	107.15	23.224			
10,300.00	7,950.00	9,724.29	7,950.00	62.87	54.17	90.00	-595.38	-1,090.54	2,487.95	2,376.58	111.37	22.340			
10,400.00	7,950.00	9,824.29	7,950.00	63.95	56.39	90.00	-595.95	-1,190.54	2,487.49	2,371.81	115.68	21.503			
10,500.00	7,950.00	9,924.29	7,950.00	65.35	58.65	90.00	-596.53	-1,290.53	2,487.03	2,366.95	120.08	20.711			
10,600.00	7,950.00	10,024.29	7,950.00	67.00	60.95	90.00	-597.10	-1,390.53	2,486.58	2,362.02	124.56	19.963			
10,700.00	7,950.00	10,124.29	7,950.00	68.85	63.28	90.00	-597.68	-1,490.53	2,486.12	2,357.01	129.11	19.256			
10,800.00	7,950.00	10,224.28	7,950.00	70.83	65.63	90.00	-598.25	-1,590.53	2,485.66	2,351.95	133.72	18.589			
10,900.00	7,950.00	10,324.28	7,950.00	72.91	68.01	90.00	-598.83	-1,690.52	2,485.21	2,346.83	138.38	17.959			
11,000.00	7,950.00	10,424.28	7,950.00	75.07	70.41	90.00	-599.40	-1,790.52	2,484.75	2,341.65	143.10	17.364			
11,100.00	7,950.00	10,524.28	7,950.00	77.28	72.83	90.00	-599.98	-1,890.52	2,484.29	2,336.44	147.86	16.802			
11,200.00	7,950.00	10,624.28	7,950.00	79.54	75.27	90.00	-600.55	-1,990.51	2,483.84	2,331.18	152.66	16.271			
11,300.00	7,950.00	10,724.28	7,950.00	81.83	77.73	90.00	-601.13	-2,090.51	2,483.38	2,325.88	157.50	15.768			
11,400.00	7,950.00	10,824.28	7,950.00	84.16	80.20	90.00	-601.70	-2,190.51	2,482.92	2,320.55	162.37	15.292			
11,500.00	7,950.00	10,924.28	7,950.00	86.51	82.68	90.00	-602.28	-2,290.51	2,482.47	2,315.19	167.28	14.841			
11,600.00	7,950.00	11,024.28	7,950.00	88.89	85.18	90.00	-602.85	-2,390.50	2,482.01	2,309.80	172.21	14.413			
11,700.00	7,950.00	11,124.27	7,950.00	91.29	87.69	90.00	-603.42	-2,490.50	2,481.55	2,304.38	177.17	14.007			
11,800.00	7,950.00	11,224.27	7,950.00	93.71	90.21	90.00	-604.00	-2,590.50	2,481.10	2,298.94	182.15	13.621			
11,900.00	7,950.00	11,324.27	7,950.00	96.14	92.74	90.00	-604.57	-2,690.50	2,480.64	2,293.48	187.16	13.254			
12,000.00	7,950.00	11,424.27	7,950.00	98.59	95.27	90.00	-605.15	-2,790.49	2,480.18	2,288.00	192.18	12.905			
12,100.00	7,950.00	11,524.27	7,950.00	101.05	97.82	90.00	-605.72	-2,890.49	2,479.72	2,282.50	197.23	12.573			
12,200.00	7,950.00	11,624.27	7,950.00	103.52	100.37	90.00	-606.30	-2,990.49	2,479.27	2,276.98	202.29	12.256			
12,300.00	7,950.00	11,724.27	7,950.00	106.01	102.93	90.00	-606.87	-3,090.49	2,478.81	2,271.44	207.37	11.954			
12,400.00	7,950.00	11,824.27	7,950.00	108.50	105.50	90.00	-607.45	-3,190.48	2,478.35	2,265.89	212.46	11.665			
12,500.00	7,950.00	11,924.27	7,950.00	111.01	108.07	90.00	-608.02	-3,290.48	2,477.90	2,260.33	217.57	11.389			
12,600.00	7,950.00	12,024.27	7,950.00	113.52	110.65	90.00	-608.60	-3,390.48	2,477.44	2,254.75	222.69	11.125			
12,700.00	7,950.00	12,124.26	7,950.00	116.04	113.23	90.00	-609.17	-3,490.47	2,476.98	2,249.16	227.82	10.872			
12,800.00	7,950.00	12,224.26	7,950.00	118.57	115.82	90.00	-609.75	-3,590.47	2,476.53	2,243.56	232.97	10.630			
12,900.00	7,950.00	12,324.26	7,950.00	121.11	118.41	90.00	-610.32	-3,690.47	2,476.07	2,237.95	238.12	10.398			
13,000.00	7,950.00	12,424.26	7,950.00	123.65	121.01	90.00	-610.90	-3,790.47	2,475.61	2,232.33	243.28	10.176			
13,100.00	7,950.00	12,524.26	7,950.00	126.20	123.61	90.00	-611.47	-3,890.46	2,475.16	2,226.70	248.46	9.962			
13,200.00	7,950.00	12,624.26	7,950.00	128.75	126.21	90.00	-612.04	-3,990.46	2,474.70	2,221.06	253.64	9.757			
13,300.00	7,950.00	12,724.26	7,950.00	131.31	128.82	90.00	-612.62	-4,090.46	2,474.24	2,215.41	258.83	9.559			
13,400.00	7,950.00	12,824.26	7,950.00	133.88	131.43	90.00	-613.19	-4,190.46	2,473.79	2,209.76	264.03	9.369			
13,500.00	7,950.00	12,924.26	7,950.00	136.45	134.05	90.00	-613.77	-4,290.45	2,473.33	2,204.09	269.24	9.187			
13,600.00	7,950.00	13,024.26	7,950.00	139.02	136.66	90.00	-614.34	-4,390.45	2,472.87	2,198.43	274.45	9.010			
13,700.00	7,950.00	13,124.25	7,950.00	141.60	139.28	90.00	-614.92	-4,490.45	2,472.42	2,192.75	279.67	8.841			
13,800.00	7,950.00	13,224.25	7,950.00	144.19	141.91	90.00	-615.49	-4,590.44	2,471.96	2,187.07	284.89	8.677			
13,900.00	7,950.00	13,324.25	7,950.00	146.77	144.53	90.00	-616.07	-4,690.44	2,471.50	2,181.38	290.12	8.519			
14,000.00	7,950.00	13,424.25	7,950.00	149.36	147.16	90.00	-616.64	-4,790.44	2,471.05	2,175.69	295.36	8.366			
14,100.00	7,950.00	13,524.25	7,950.00	151.96	149.79	90.00	-617.22	-4,890.44	2,470.59	2,169.99	300.60	8.219			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 2BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,200.00	7,950.00	13,624.25	7,950.00	154.56	152.42	90.00	-617.79	-4,990.43	2,470.13	2,164.29	305.85	8.076			
14,300.00	7,950.00	13,724.25	7,950.00	157.16	155.06	90.00	-618.37	-5,090.43	2,469.67	2,158.58	311.10	7.939			
14,400.00	7,950.00	13,824.25	7,950.00	159.76	157.69	90.00	-618.94	-5,190.43	2,469.22	2,152.87	316.35	7.805			
14,500.00	7,950.00	13,924.25	7,950.00	162.37	160.33	90.00	-619.52	-5,290.43	2,468.76	2,147.15	321.61	7.676			
14,600.00	7,950.00	14,024.24	7,950.00	164.98	162.97	90.00	-620.09	-5,390.42	2,468.30	2,141.43	326.88	7.551			
14,700.00	7,950.00	14,124.24	7,950.00	167.59	165.61	90.00	-620.67	-5,490.42	2,467.85	2,135.70	332.14	7.430			
14,800.00	7,950.00	14,224.24	7,950.00	170.20	168.25	90.00	-621.24	-5,590.42	2,467.39	2,129.98	337.41	7.313			
14,900.00	7,950.00	14,324.24	7,950.00	172.82	170.90	90.00	-621.81	-5,690.42	2,466.93	2,124.24	342.69	7.199			
15,000.00	7,950.00	14,424.24	7,950.00	175.44	173.54	90.00	-622.39	-5,790.41	2,466.48	2,118.51	347.97	7.088			
15,100.00	7,950.00	14,524.24	7,950.00	178.06	176.19	90.00	-622.96	-5,890.41	2,466.02	2,112.77	353.25	6.981			
15,200.00	7,950.00	14,624.24	7,950.00	180.68	178.84	90.00	-623.54	-5,990.41	2,465.56	2,107.03	358.53	6.877			
15,300.00	7,950.00	14,724.24	7,950.00	183.31	181.49	90.00	-624.11	-6,090.40	2,465.11	2,101.29	363.82	6.776			
15,400.00	7,950.00	14,824.24	7,950.00	185.93	184.14	90.00	-624.69	-6,190.40	2,464.65	2,095.54	369.11	6.677			
15,500.00	7,950.00	14,924.24	7,950.00	188.56	186.79	90.00	-625.26	-6,290.40	2,464.19	2,089.79	374.40	6.582			
15,600.00	7,950.00	15,024.23	7,950.00	191.19	189.45	90.00	-625.84	-6,390.40	2,463.74	2,084.04	379.70	6.489			
15,700.00	7,950.00	15,124.23	7,950.00	193.82	192.10	90.00	-626.41	-6,490.39	2,463.28	2,078.28	385.00	6.398			
15,800.00	7,950.00	15,224.23	7,950.00	196.46	194.76	90.00	-626.99	-6,590.39	2,462.82	2,072.53	390.30	6.310			
15,900.00	7,950.00	15,324.23	7,950.00	199.09	197.41	90.00	-627.56	-6,690.39	2,462.37	2,066.77	395.60	6.224			
16,000.00	7,950.00	15,424.23	7,950.00	201.73	200.07	90.00	-628.14	-6,790.39	2,461.91	2,061.01	400.90	6.141			
16,100.00	7,950.00	15,524.23	7,950.00	204.37	202.73	90.00	-628.71	-6,890.38	2,461.45	2,055.24	406.21	6.060			
16,200.00	7,950.00	15,624.23	7,950.00	207.01	205.39	90.00	-629.29	-6,990.38	2,461.00	2,049.48	411.52	5.980			
16,300.00	7,950.00	15,724.23	7,950.00	209.65	208.05	90.00	-629.86	-7,090.38	2,460.54	2,043.71	416.83	5.903			
16,400.00	7,950.00	15,824.23	7,950.00	212.29	210.71	90.00	-630.43	-7,190.37	2,460.08	2,037.94	422.14	5.828			
16,500.00	7,950.00	15,924.22	7,950.00	214.93	213.37	90.00	-631.01	-7,290.37	2,459.62	2,032.17	427.45	5.754			
16,600.00	7,950.00	16,024.22	7,950.00	217.58	216.03	90.00	-631.58	-7,390.37	2,459.17	2,026.40	432.77	5.682			
16,700.00	7,950.00	16,124.22	7,950.00	220.22	218.69	90.00	-632.16	-7,490.37	2,458.71	2,020.62	438.09	5.612			
16,800.00	7,950.00	16,224.22	7,950.00	222.87	221.36	90.00	-632.73	-7,590.36	2,458.25	2,014.85	443.41	5.544			
16,900.00	7,950.00	16,324.22	7,950.00	225.52	224.02	90.00	-633.31	-7,690.36	2,457.80	2,009.07	448.73	5.477			
17,000.00	7,950.00	16,424.22	7,950.00	228.16	226.68	90.00	-633.88	-7,790.36	2,457.34	2,003.29	454.05	5.412			
17,100.00	7,950.00	16,524.22	7,950.00	230.81	229.35	90.00	-634.46	-7,890.36	2,456.88	1,997.51	459.37	5.348			
17,200.00	7,950.00	16,624.22	7,950.00	233.46	232.02	90.00	-635.03	-7,990.35	2,456.43	1,991.73	464.70	5.286			
17,300.00	7,950.00	16,724.22	7,950.00	236.12	234.68	90.00	-635.61	-8,090.35	2,455.97	1,985.95	470.02	5.225			
17,400.00	7,950.00	16,824.22	7,950.00	238.77	237.35	90.00	-636.18	-8,190.35	2,455.51	1,980.16	475.35	5.166			
17,500.00	7,950.00	16,924.21	7,950.00	241.42	240.02	90.00	-636.76	-8,290.35	2,455.06	1,974.38	480.68	5.107			
17,600.00	7,950.00	17,024.21	7,950.00	244.08	242.68	90.00	-637.33	-8,390.34	2,454.60	1,968.59	486.01	5.051			
17,700.00	7,950.00	17,124.21	7,950.00	246.73	245.35	90.00	-637.91	-8,490.34	2,454.14	1,962.80	491.34	4.995			
17,800.00	7,950.00	17,224.21	7,950.00	249.39	248.02	90.00	-638.48	-8,590.34	2,453.69	1,957.01	496.67	4.940			
17,900.00	7,950.00	17,324.21	7,950.00	252.04	250.69	90.00	-639.06	-8,690.33	2,453.23	1,951.22	502.01	4.887			
18,000.00	7,950.00	17,424.21	7,950.00	254.70	253.36	90.00	-639.63	-8,790.33	2,452.77	1,945.43	507.34	4.835			
18,100.00	7,950.00	17,524.21	7,950.00	257.36	256.03	90.00	-640.20	-8,890.33	2,452.32	1,939.64	512.68	4.783			
18,200.00	7,950.00	17,624.21	7,950.00	260.02	258.70	90.00	-640.78	-8,990.33	2,451.86	1,933.85	518.01	4.733			
18,300.00	7,950.00	17,724.21	7,950.00	262.67	261.37	90.00	-641.35	-9,090.32	2,451.40	1,928.05	523.35	4.684			
18,400.00	7,950.00	17,824.21	7,950.00	265.33	264.05	90.00	-641.93	-9,190.32	2,450.95	1,922.26	528.69	4.636			
18,500.00	7,950.00	17,924.20	7,950.00	267.99	266.72	90.00	-642.50	-9,290.32	2,450.49	1,916.46	534.03	4.589			
18,600.00	7,950.00	18,024.20	7,950.00	270.66	269.39	90.00	-643.08	-9,390.32	2,450.03	1,910.67	539.37	4.542			
18,700.00	7,950.00	18,124.20	7,950.00	273.32	272.06	90.00	-643.65	-9,490.31	2,449.58	1,904.87	544.71	4.497			
18,800.00	7,950.00	18,224.20	7,950.00	275.98	274.74	90.00	-644.23	-9,590.31	2,449.12	1,899.07	550.05	4.453			
18,840.55	7,950.00	18,253.56	7,950.00	277.06	275.52	90.00	-644.40	-9,619.67	2,448.96	1,897.15	551.80	4.438			
18,847.73	7,950.00	18,253.56	7,950.00	277.25	275.52	90.00	-644.40	-9,619.67	2,448.97	1,897.05	551.92	4.437 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.10	0.10	0.00	0.00	-0.16	100.17	-0.28	100.17					
100.00	100.00	100.10	100.10	0.13	0.13	-0.16	100.17	-0.28	100.17	99.90	0.27	372.100		
200.00	200.00	200.10	200.10	0.49	0.49	-0.16	100.17	-0.28	100.17	99.19	0.99	101.580		
250.00	250.00	250.10	250.10	0.67	0.67	-0.16	100.17	-0.28	100.17	98.83	1.34	74.500		
254.46	254.46	254.71	254.71	0.69	0.69	-163.55	100.17	-0.28	100.17	98.80	1.38	72.812 CC		
300.00	300.00	301.74	301.74	0.84	0.85	-163.51	99.75	-0.08	100.18	98.49	1.69	59.165		
400.00	399.93	405.02	404.94	1.19	1.20	-163.21	96.37	1.48	100.25	97.87	2.38	42.061		
500.00	499.68	508.28	507.93	1.54	1.57	-162.59	89.62	4.62	100.41	97.32	3.09	32.464		
600.00	599.13	611.52	610.56	1.92	1.96	-161.68	79.51	9.31	100.66	96.85	3.82	26.378		
700.00	698.15	714.73	712.70	2.32	2.38	-160.47	66.05	15.55	101.04	96.49	4.56	22.179		
800.00	796.63	817.91	814.20	2.74	2.83	-158.97	49.28	23.33	101.58	96.26	5.31	19.113		
900.00	894.44	921.04	914.92	3.20	3.31	-157.20	29.21	32.65	102.30	96.20	6.10	16.764 ES		
1,000.00	991.46	1,024.11	1,014.73	3.70	3.84	-155.18	5.88	43.47	103.26	96.33	6.93	14.898		
1,100.00	1,087.58	1,125.87	1,112.38	4.24	4.39	-153.05	-20.09	55.52	104.75	96.94	7.81	13.415		
1,200.00	1,182.68	1,225.75	1,208.04	4.83	4.96	-151.67	-46.13	67.61	108.93	100.20	8.73	12.475		
1,300.00	1,276.65	1,325.48	1,303.56	5.46	5.54	-151.22	-72.13	79.67	116.21	106.54	9.67	12.021		
1,400.00	1,369.36	1,424.93	1,398.81	6.14	6.12	-151.55	-98.06	91.70	126.54	115.94	10.60	11.938		
1,471.15	1,434.50	1,504.54	1,466.37	6.66	6.59	-152.16	-116.45	100.24	135.75	124.45	11.30	12.015		
1,500.00	1,460.77	1,524.02	1,493.72	6.87	6.71	-152.48	-123.90	103.69	139.81	128.29	11.52	12.135		
1,600.00	1,551.82	1,622.99	1,588.51	7.62	7.30	-153.47	-149.70	115.66	153.91	141.47	12.44	12.374		
1,700.00	1,642.88	1,721.96	1,683.30	8.38	7.89	-154.30	-175.51	127.64	168.04	154.68	13.36	12.580		
1,800.00	1,733.93	1,820.93	1,778.10	9.15	8.49	-154.99	-201.31	139.61	182.20	167.92	14.28	12.759		
1,900.00	1,824.98	1,919.90	1,872.89	9.93	9.08	-155.59	-227.12	151.59	196.38	181.18	15.21	12.916		
2,000.00	1,916.03	2,018.87	1,967.68	10.71	9.68	-156.10	-252.92	163.56	210.58	194.45	16.13	13.054		
2,100.00	2,007.08	2,117.84	2,062.48	11.49	10.28	-156.55	-278.73	175.53	224.80	207.74	17.06	13.177		
2,200.00	2,098.13	2,216.81	2,157.27	12.28	10.88	-156.95	-304.53	187.51	239.02	221.04	17.99	13.287		
2,300.00	2,189.19	2,315.78	2,252.07	13.07	11.48	-157.30	-330.33	199.48	253.26	234.34	18.92	13.386		
2,400.00	2,280.24	2,414.75	2,346.86	13.86	12.08	-157.61	-356.14	211.45	267.51	247.66	19.85	13.475		
2,500.00	2,371.29	2,513.72	2,441.65	14.65	12.69	-157.90	-381.94	223.43	281.76	260.98	20.78	13.557		
2,600.00	2,462.34	2,612.69	2,536.45	15.44	13.29	-158.15	-407.75	235.40	296.02	274.30	21.72	13.631		
2,700.00	2,553.39	2,711.66	2,631.24	16.24	13.89	-158.38	-433.55	247.38	310.28	287.63	22.65	13.698		
2,800.00	2,644.45	2,810.63	2,726.03	17.03	14.50	-158.60	-459.36	259.35	324.55	300.97	23.59	13.761		
2,900.00	2,735.50	2,909.60	2,820.83	17.83	15.10	-158.79	-485.16	271.32	338.83	314.31	24.52	13.818		
3,000.00	2,826.55	3,008.57	2,915.62	18.63	15.71	-158.97	-510.97	283.30	353.10	327.65	25.46	13.871		
3,100.00	2,917.60	3,107.54	3,010.41	19.43	16.31	-159.13	-536.77	295.27	367.38	340.99	26.39	13.921		
3,200.00	3,008.65	3,206.51	3,105.21	20.23	16.92	-159.28	-562.58	307.24	381.66	354.34	27.33	13.966		
3,300.00	3,099.70	3,305.48	3,200.00	21.03	17.52	-159.42	-588.38	319.22	395.95	367.69	28.26	14.009		
3,400.00	3,190.76	3,404.45	3,294.79	21.83	18.13	-159.56	-614.19	331.19	410.24	381.04	29.20	14.049		
3,500.00	3,281.81	3,503.42	3,389.59	22.63	18.74	-159.68	-639.99	343.17	424.52	394.39	30.14	14.086		
3,600.00	3,372.86	3,602.39	3,484.38	23.43	19.34	-159.79	-665.79	355.14	438.81	407.74	31.07	14.121		
3,700.00	3,463.91	3,701.36	3,579.17	24.23	19.95	-159.90	-691.60	367.11	453.11	421.09	32.01	14.154		
3,800.00	3,554.96	3,800.33	3,673.97	25.03	20.56	-160.00	-717.40	379.09	467.40	434.45	32.95	14.185		
3,900.00	3,646.01	3,900.70	3,768.76	25.83	21.17	-160.10	-743.21	391.06	481.70	447.80	33.89	14.212		
4,000.00	3,737.07	4,001.73	3,863.55	26.63	21.79	-160.18	-769.01	403.03	495.99	461.15	34.84	14.236		
4,100.00	3,828.12	4,102.76	3,958.35	27.43	22.41	-160.27	-794.82	415.01	510.29	474.50	35.79	14.258		
4,200.00	3,919.17	4,203.79	4,053.14	28.24	23.03	-160.35	-820.62	426.98	524.59	487.85	36.74	14.279		
4,300.00	4,010.22	4,304.82	4,147.93	29.04	23.65	-160.42	-846.43	438.96	538.89	501.20	37.69	14.300		
4,400.00	4,101.27	4,405.85	4,242.73	29.84	24.27	-160.49	-872.23	450.93	553.19	514.55	38.63	14.319		
4,500.00	4,192.33	4,506.88	4,337.52	30.65	24.89	-160.56	-898.04	462.90	567.49	527.91	39.58	14.337		
4,600.00	4,283.38	4,607.91	4,432.32	31.45	25.51	-160.63	-923.84	474.88	581.79	541.26	40.53	14.355		
4,700.00	4,374.43	4,691.06	4,527.11	32.25	26.02	-160.69	-949.65	486.85	596.09	554.69	41.40	14.400		
4,800.00	4,465.48	4,809.97	4,621.90	33.05	26.75	-160.75	-975.45	498.82	610.39	567.97	42.43	14.387		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 3CH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,889.00	4,716.70	33.86	27.24	-160.80	-1,001.26	510.80	624.70	581.42	43.27	14.436			
5,000.00	4,647.58	4,987.97	4,811.49	34.66	27.84	-160.86	-1,027.06	522.77	639.00	594.79	44.21	14.452			
5,100.00	4,738.64	5,086.94	4,906.28	35.47	28.45	-160.91	-1,052.86	534.74	653.31	608.15	45.15	14.469			
5,200.00	4,829.69	5,185.91	5,001.08	36.27	29.06	-160.96	-1,078.67	546.72	667.61	621.52	46.09	14.484			
5,300.00	4,920.74	5,284.88	5,095.87	37.07	29.67	-161.00	-1,104.47	558.69	681.92	634.88	47.03	14.499			
5,400.00	5,011.79	5,383.85	5,190.66	37.88	30.27	-161.05	-1,130.28	570.67	696.22	648.25	47.97	14.513			
5,500.00	5,102.84	5,482.82	5,285.46	38.68	30.88	-161.09	-1,156.08	582.64	710.53	661.62	48.91	14.527			
5,600.00	5,193.89	5,581.79	5,380.25	39.48	31.49	-161.13	-1,181.89	594.61	724.84	674.98	49.85	14.540			
5,700.00	5,284.95	5,680.76	5,475.04	40.29	32.10	-161.17	-1,207.69	606.59	739.14	688.35	50.79	14.552			
5,800.00	5,376.00	5,779.72	5,569.84	41.09	32.71	-161.21	-1,233.50	618.56	753.45	701.72	51.73	14.565			
5,900.00	5,467.05	5,878.69	5,664.63	41.90	33.31	-161.25	-1,259.30	630.53	767.76	715.09	52.67	14.576			
6,000.00	5,558.10	5,977.66	5,759.42	42.70	33.92	-161.28	-1,285.11	642.51	782.07	728.45	53.61	14.588			
6,100.00	5,649.15	6,076.63	5,854.22	43.51	34.53	-161.32	-1,310.91	654.48	796.37	741.82	54.55	14.598			
6,200.00	5,740.21	6,175.60	5,949.01	44.31	35.14	-161.35	-1,336.72	666.46	810.68	755.19	55.49	14.609			
6,300.00	5,831.26	6,274.57	6,043.80	45.11	35.75	-161.38	-1,362.52	678.43	824.99	768.56	56.43	14.619			
6,400.00	5,922.31	6,373.54	6,138.60	45.92	36.36	-161.41	-1,388.32	690.40	839.30	781.93	57.37	14.629			
6,500.00	6,013.36	6,472.51	6,233.39	46.72	36.96	-161.44	-1,414.13	702.38	853.61	795.30	58.31	14.638			
6,600.00	6,104.41	6,571.48	6,328.19	47.53	37.57	-161.47	-1,439.93	714.35	867.92	808.67	59.25	14.648			
6,700.00	6,195.46	6,670.45	6,422.98	48.33	38.18	-161.50	-1,465.74	726.32	882.23	822.03	60.19	14.656			
6,800.00	6,286.52	6,769.42	6,517.77	49.14	38.79	-161.53	-1,491.54	738.30	896.54	835.40	61.13	14.665			
6,900.00	6,377.57	6,868.39	6,612.57	49.94	39.40	-161.55	-1,517.35	750.27	910.85	848.77	62.08	14.673			
7,000.00	6,468.62	6,967.36	6,707.36	50.75	40.00	-161.58	-1,543.15	762.25	925.16	862.14	63.02	14.681			
7,100.00	6,559.67	7,066.33	6,802.15	51.55	40.61	-161.60	-1,568.96	774.22	939.47	875.51	63.96	14.689			
7,200.00	6,650.72	7,165.30	6,896.95	52.36	41.22	-161.63	-1,594.76	786.19	953.78	888.88	64.90	14.697			
7,300.00	6,741.77	7,264.27	6,991.74	53.16	41.83	-161.65	-1,620.57	798.17	968.09	902.25	65.84	14.704			
7,400.00	6,832.83	7,363.24	7,086.53	53.97	42.44	-161.67	-1,646.37	810.14	982.40	915.62	66.78	14.711			
7,500.00	6,923.88	7,462.21	7,181.33	54.77	43.05	-161.69	-1,672.18	822.11	996.71	928.99	67.72	14.718			
7,600.00	7,014.93	7,561.18	7,276.12	55.58	43.65	-161.71	-1,697.98	834.09	1,011.02	942.36	68.66	14.725			
7,700.00	7,105.98	7,663.07	7,373.86	56.38	44.27	-161.84	-1,724.59	844.64	1,025.27	955.72	69.56	14.740			
7,800.00	7,197.03	7,765.84	7,472.78	57.19	44.77	-162.81	-1,751.54	839.80	1,039.13	969.20	69.93	14.859			
7,900.00	7,288.09	7,859.86	7,561.23	57.99	45.11	-164.54	-1,775.65	819.40	1,053.34	983.53	69.81	15.088			
7,982.08	7,362.82	7,928.16	7,622.84	58.65	45.29	-166.25	-1,792.46	795.32	1,066.21	996.70	69.52	15.338			
8,000.00	7,379.16	7,942.07	7,635.02	58.79	45.32	-170.82	-1,795.78	789.50	1,069.25	999.80	69.44	15.397			
8,050.00	7,424.95	7,980.17	7,667.66	59.18	45.40	175.94	-1,804.69	771.98	1,078.08	1,008.82	69.26	15.565			
8,100.00	7,470.74	8,017.36	7,698.37	59.53	45.45	162.75	-1,813.08	752.75	1,087.36	1,018.25	69.11	15.734			
8,150.00	7,516.17	8,053.77	7,727.20	59.84	45.50	150.50	-1,820.95	731.97	1,096.93	1,027.96	68.98	15.903			
8,200.00	7,560.91	8,089.51	7,754.21	60.13	45.54	139.75	-1,828.34	709.76	1,106.67	1,037.81	68.87	16.070			
8,250.00	7,604.61	8,124.68	7,779.42	60.38	45.56	130.64	-1,835.23	686.25	1,116.45	1,047.67	68.78	16.233			
8,300.00	7,646.94	8,159.35	7,802.88	60.60	45.57	123.03	-1,841.65	661.54	1,126.13	1,057.43	68.70	16.392			
8,350.00	7,687.58	8,193.60	7,824.58	60.78	45.58	116.70	-1,847.59	635.73	1,135.59	1,066.95	68.64	16.545			
8,400.00	7,726.22	8,227.48	7,844.56	60.94	45.57	111.43	-1,853.06	608.92	1,144.73	1,076.12	68.60	16.686			
8,450.00	7,762.57	8,261.05	7,862.80	61.07	45.56	107.02	-1,858.06	581.20	1,153.43	1,084.83	68.59	16.816			
8,500.00	7,796.34	8,294.34	7,879.33	61.18	45.54	103.32	-1,862.59	552.66	1,161.59	1,092.98	68.61	16.929			
8,550.00	7,827.28	8,327.40	7,894.12	61.26	45.51	100.23	-1,866.66	523.38	1,169.14	1,100.45	68.69	17.022			
8,600.00	7,855.16	8,360.27	7,907.19	61.31	45.48	97.64	-1,870.25	493.44	1,175.98	1,107.18	68.81	17.091			
8,650.00	7,879.76	8,392.98	7,918.53	61.35	45.45	95.50	-1,873.37	462.93	1,182.06	1,113.06	68.99	17.133			
8,700.00	7,900.90	8,425.55	7,928.13	61.37	45.41	93.75	-1,876.03	431.92	1,187.30	1,118.04	69.25	17.144			
8,750.00	7,918.42	8,458.01	7,936.00	61.37	45.36	92.37	-1,878.20	400.51	1,191.65	1,122.07	69.59	17.125			
8,800.00	7,932.18	8,490.39	7,942.12	61.35	45.31	91.31	-1,879.91	368.76	1,195.08	1,125.07	70.01	17.071			
8,850.00	7,942.07	8,522.70	7,946.50	61.31	45.26	90.58	-1,881.14	336.77	1,197.55	1,127.04	70.52	16.983			
8,900.00	7,948.03	8,554.98	7,949.12	61.26	45.21	90.14	-1,881.89	304.62	1,199.04	1,127.94	71.10	16.864			
8,949.68	7,950.00	8,587.57	7,950.00	61.20	45.15	90.00	-1,882.16	272.71	1,199.53	1,127.76	71.77	16.714			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

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Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,000.00	7,950.00	8,637.23	7,950.00	61.14	45.06	90.00	-1,882.22	222.39	1,199.53	1,127.13	72.41	16.566		
9,100.00	7,950.00	8,737.23	7,950.00	61.03	44.90	90.00	-1,882.33	122.39	1,199.54	1,125.61	73.93	16.226		
9,200.00	7,950.00	8,837.23	7,950.00	60.93	44.76	90.00	-1,882.45	22.39	1,199.54	1,123.74	75.80	15.826		
9,300.00	7,950.00	8,937.23	7,950.00	60.85	44.64	90.00	-1,882.56	-77.61	1,199.54	1,121.55	78.00	15.380		
9,400.00	7,950.00	9,037.23	7,950.00	60.80	44.54	90.00	-1,882.68	-177.61	1,199.55	1,119.05	80.50	14.902		
9,500.00	7,950.00	9,137.23	7,950.00	60.77	44.48	90.00	-1,882.79	-277.61	1,199.55	1,116.28	83.27	14.406		
9,600.00	7,950.00	9,237.23	7,950.00	60.76	44.49	90.00	-1,882.91	-377.61	1,199.56	1,113.27	86.29	13.902		
9,700.00	7,950.00	9,337.23	7,950.00	60.79	44.82	90.00	-1,883.02	-477.61	1,199.56	1,110.03	89.53	13.398		
9,800.00	7,950.00	9,437.23	7,950.00	60.86	46.04	90.00	-1,883.13	-577.61	1,199.56	1,106.59	92.97	12.902		
9,900.00	7,950.00	9,537.23	7,950.00	60.99	47.80	90.00	-1,883.25	-677.61	1,199.57	1,102.97	96.59	12.419		
10,000.00	7,950.00	9,637.23	7,950.00	61.21	49.72	90.00	-1,883.36	-777.61	1,199.57	1,099.20	100.37	11.952		
10,100.00	7,950.00	9,737.23	7,950.00	61.56	51.72	90.00	-1,883.48	-877.61	1,199.57	1,095.29	104.29	11.503		
10,200.00	7,950.00	9,837.23	7,950.00	62.08	53.80	90.00	-1,883.59	-977.61	1,199.58	1,091.24	108.33	11.073		
10,300.00	7,950.00	9,937.23	7,950.00	62.87	55.92	90.00	-1,883.71	-1,077.61	1,199.58	1,087.09	112.49	10.664		
10,400.00	7,950.00	10,037.23	7,950.00	63.95	58.10	90.00	-1,883.82	-1,177.61	1,199.58	1,082.84	116.75	10.275		
10,500.00	7,950.00	10,137.23	7,950.00	65.35	60.31	90.00	-1,883.93	-1,277.61	1,199.59	1,078.49	121.09	9.906		
10,600.00	7,950.00	10,237.23	7,950.00	67.00	62.56	90.00	-1,884.05	-1,377.61	1,199.59	1,074.07	125.52	9.557		
10,700.00	7,950.00	10,337.23	7,950.00	68.85	64.84	90.00	-1,884.16	-1,477.61	1,199.60	1,069.57	130.02	9.226		
10,800.00	7,950.00	10,437.23	7,950.00	70.83	67.15	90.00	-1,884.28	-1,577.61	1,199.60	1,065.01	134.58	8.913		
10,900.00	7,950.00	10,537.23	7,950.00	72.91	69.49	90.00	-1,884.39	-1,677.61	1,199.60	1,060.39	139.21	8.617		
11,000.00	7,950.00	10,637.23	7,950.00	75.07	71.85	90.00	-1,884.51	-1,777.61	1,199.61	1,055.72	143.88	8.337		
11,100.00	7,950.00	10,737.23	7,950.00	77.28	74.24	90.00	-1,884.62	-1,877.61	1,199.61	1,051.00	148.61	8.072		
11,200.00	7,950.00	10,837.23	7,950.00	79.54	76.64	90.00	-1,884.73	-1,977.61	1,199.61	1,046.24	153.38	7.821		
11,300.00	7,950.00	10,937.23	7,950.00	81.83	79.06	90.00	-1,884.85	-2,077.61	1,199.62	1,041.43	158.18	7.584		
11,400.00	7,950.00	11,037.23	7,950.00	84.16	81.49	90.00	-1,884.96	-2,177.61	1,199.62	1,036.59	163.03	7.358		
11,500.00	7,950.00	11,137.23	7,950.00	86.51	83.95	90.00	-1,885.08	-2,277.61	1,199.62	1,031.72	167.90	7.145		
11,600.00	7,950.00	11,237.23	7,950.00	88.89	86.41	90.00	-1,885.19	-2,377.61	1,199.63	1,026.82	172.81	6.942		
11,700.00	7,950.00	11,337.23	7,950.00	91.29	88.89	90.00	-1,885.31	-2,477.61	1,199.63	1,021.89	177.74	6.749		
11,800.00	7,950.00	11,437.23	7,950.00	93.71	91.38	90.00	-1,885.42	-2,577.61	1,199.64	1,016.93	182.70	6.566		
11,900.00	7,950.00	11,537.23	7,950.00	96.14	93.88	90.00	-1,885.53	-2,677.61	1,199.64	1,011.95	187.68	6.392		
12,000.00	7,950.00	11,637.23	7,950.00	98.59	96.39	90.00	-1,885.65	-2,777.61	1,199.64	1,006.95	192.69	6.226		
12,100.00	7,950.00	11,737.23	7,950.00	101.05	98.91	90.00	-1,885.76	-2,877.61	1,199.65	1,001.93	197.71	6.068		
12,200.00	7,950.00	11,837.23	7,950.00	103.52	101.44	90.00	-1,885.88	-2,977.61	1,199.65	996.89	202.76	5.917		
12,300.00	7,950.00	11,937.23	7,950.00	106.01	103.97	90.00	-1,885.99	-3,077.61	1,199.65	991.84	207.82	5.773		
12,400.00	7,950.00	12,037.23	7,950.00	108.50	106.51	90.00	-1,886.10	-3,177.61	1,199.66	986.77	212.89	5.635		
12,500.00	7,950.00	12,137.23	7,950.00	111.01	109.06	90.00	-1,886.22	-3,277.61	1,199.66	981.68	217.98	5.503		
12,600.00	7,950.00	12,237.23	7,950.00	113.52	111.62	90.00	-1,886.33	-3,377.61	1,199.66	976.58	223.09	5.378		
12,700.00	7,950.00	12,337.23	7,950.00	116.04	114.18	90.00	-1,886.45	-3,477.61	1,199.67	971.46	228.20	5.257		
12,800.00	7,950.00	12,437.23	7,950.00	118.57	116.75	90.00	-1,886.56	-3,577.61	1,199.67	966.34	233.33	5.141		
12,900.00	7,950.00	12,537.23	7,950.00	121.11	119.32	90.00	-1,886.68	-3,677.61	1,199.67	961.20	238.47	5.031		
13,000.00	7,950.00	12,637.23	7,950.00	123.65	121.90	90.00	-1,886.79	-3,777.61	1,199.68	956.05	243.63	4.924		
13,100.00	7,950.00	12,737.23	7,950.00	126.20	124.48	90.00	-1,886.90	-3,877.61	1,199.68	950.90	248.79	4.822		
13,200.00	7,950.00	12,837.23	7,950.00	128.75	127.07	90.00	-1,887.02	-3,977.61	1,199.69	945.73	253.96	4.724		
13,300.00	7,950.00	12,937.23	7,950.00	131.31	129.66	90.00	-1,887.13	-4,077.61	1,199.69	940.55	259.14	4.630		
13,400.00	7,950.00	13,037.23	7,950.00	133.88	132.26	90.00	-1,887.25	-4,177.61	1,199.69	935.37	264.32	4.539		
13,500.00	7,950.00	13,137.23	7,950.00	136.45	134.86	90.00	-1,887.36	-4,277.61	1,199.70	930.18	269.52	4.451		
13,600.00	7,950.00	13,237.23	7,950.00	139.02	137.46	90.00	-1,887.48	-4,377.61	1,199.70	924.98	274.72	4.367		
13,700.00	7,950.00	13,337.23	7,950.00	141.60	140.06	90.00	-1,887.59	-4,477.61	1,199.70	919.77	279.93	4.286		
13,800.00	7,950.00	13,437.23	7,950.00	144.19	142.67	90.00	-1,887.70	-4,577.61	1,199.71	914.56	285.14	4.207		
13,900.00	7,950.00	13,537.23	7,950.00	146.77	145.29	90.00	-1,887.82	-4,677.61	1,199.71	909.34	290.37	4.132		
14,000.00	7,950.00	13,637.23	7,950.00	149.36	147.90	90.00	-1,887.93	-4,777.61	1,199.71	904.12	295.59	4.059		
14,100.00	7,950.00	13,737.23	7,950.00	151.96	150.52	90.00	-1,888.05	-4,877.61	1,199.72	898.89	300.83	3.988		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 3CH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,200.00	7,950.00	13,837.23	7,950.00	154.56	153.14	90.00	-1,888.16	-4,977.61	1,199.72	893.66	306.07	3.920			
14,300.00	7,950.00	13,937.23	7,950.00	157.16	155.76	90.00	-1,888.28	-5,077.61	1,199.73	888.42	311.31	3.854			
14,400.00	7,950.00	14,037.23	7,950.00	159.76	158.38	90.00	-1,888.39	-5,177.61	1,199.73	883.17	316.56	3.790			
14,500.00	7,950.00	14,137.23	7,950.00	162.37	161.01	90.00	-1,888.50	-5,277.61	1,199.73	877.92	321.81	3.728			
14,600.00	7,950.00	14,237.23	7,950.00	164.98	163.64	90.00	-1,888.62	-5,377.61	1,199.74	872.67	327.07	3.668			
14,700.00	7,950.00	14,337.23	7,950.00	167.59	166.27	90.00	-1,888.73	-5,477.61	1,199.74	867.41	332.33	3.610			
14,800.00	7,950.00	14,437.23	7,950.00	170.20	168.90	90.00	-1,888.85	-5,577.61	1,199.74	862.15	337.59	3.554			
14,900.00	7,950.00	14,537.23	7,950.00	172.82	171.53	90.00	-1,888.96	-5,677.61	1,199.75	856.89	342.86	3.499			
15,000.00	7,950.00	14,637.23	7,950.00	175.44	174.17	90.00	-1,889.08	-5,777.61	1,199.75	851.62	348.13	3.446			
15,100.00	7,950.00	14,737.23	7,950.00	178.06	176.81	90.00	-1,889.19	-5,877.61	1,199.75	846.35	353.41	3.395			
15,200.00	7,950.00	14,837.23	7,950.00	180.68	179.45	90.00	-1,889.30	-5,977.61	1,199.76	841.07	358.69	3.345			
15,300.00	7,950.00	14,937.23	7,950.00	183.31	182.09	90.00	-1,889.42	-6,077.61	1,199.76	835.79	363.97	3.296			
15,400.00	7,950.00	15,037.23	7,950.00	185.93	184.73	90.00	-1,889.53	-6,177.61	1,199.77	830.51	369.25	3.249			
15,500.00	7,950.00	15,137.23	7,950.00	188.56	187.37	90.00	-1,889.65	-6,277.61	1,199.77	825.23	374.54	3.203			
15,600.00	7,950.00	15,237.23	7,950.00	191.19	190.02	90.00	-1,889.76	-6,377.61	1,199.77	819.94	379.83	3.159			
15,700.00	7,950.00	15,337.23	7,950.00	193.82	192.66	90.00	-1,889.88	-6,477.61	1,199.78	814.65	385.13	3.115			
15,800.00	7,950.00	15,437.23	7,950.00	196.46	195.31	90.00	-1,889.99	-6,577.61	1,199.78	809.36	390.42	3.073			
15,900.00	7,950.00	15,537.23	7,950.00	199.09	197.96	90.00	-1,890.10	-6,677.61	1,199.78	804.06	395.72	3.032			
16,000.00	7,950.00	15,637.23	7,950.00	201.73	200.61	90.00	-1,890.22	-6,777.61	1,199.79	798.77	401.02	2.992			
16,100.00	7,950.00	15,737.23	7,950.00	204.37	203.26	90.00	-1,890.33	-6,877.61	1,199.79	793.47	406.32	2.953			
16,200.00	7,950.00	15,837.23	7,950.00	207.01	205.91	90.00	-1,890.45	-6,977.61	1,199.79	788.17	411.63	2.915			
16,300.00	7,950.00	15,937.23	7,950.00	209.65	208.57	90.00	-1,890.56	-7,077.61	1,199.80	782.87	416.93	2.878			
16,400.00	7,950.00	16,037.23	7,950.00	212.29	211.22	90.00	-1,890.67	-7,177.61	1,199.80	777.56	422.24	2.842			
16,500.00	7,950.00	16,137.23	7,950.00	214.93	213.87	90.00	-1,890.79	-7,277.61	1,199.81	772.25	427.55	2.806			
16,600.00	7,950.00	16,237.23	7,950.00	217.58	216.53	90.00	-1,890.90	-7,377.61	1,199.81	766.94	432.86	2.772			
16,700.00	7,950.00	16,337.23	7,950.00	220.22	219.19	90.00	-1,891.02	-7,477.61	1,199.81	761.63	438.18	2.738			
16,800.00	7,950.00	16,437.23	7,950.00	222.87	221.84	90.00	-1,891.13	-7,577.61	1,199.82	756.32	443.49	2.705			
16,900.00	7,950.00	16,537.23	7,950.00	225.52	224.50	90.00	-1,891.25	-7,677.61	1,199.82	751.01	448.81	2.673			
17,000.00	7,950.00	16,637.23	7,950.00	228.16	227.16	90.00	-1,891.36	-7,777.61	1,199.82	745.69	454.13	2.642			
17,100.00	7,950.00	16,737.23	7,950.00	230.81	229.82	90.00	-1,891.47	-7,877.61	1,199.83	740.38	459.45	2.611			
17,200.00	7,950.00	16,837.23	7,950.00	233.46	232.48	90.00	-1,891.59	-7,977.61	1,199.83	735.06	464.77	2.582			
17,300.00	7,950.00	16,937.23	7,950.00	236.12	235.14	90.00	-1,891.70	-8,077.61	1,199.83	729.74	470.10	2.552			
17,400.00	7,950.00	17,037.23	7,950.00	238.77	237.80	90.00	-1,891.82	-8,177.61	1,199.84	724.42	475.42	2.524			
17,500.00	7,950.00	17,137.23	7,950.00	241.42	240.47	90.00	-1,891.93	-8,277.61	1,199.84	719.09	480.75	2.496			
17,600.00	7,950.00	17,237.23	7,950.00	244.08	243.13	90.00	-1,892.05	-8,377.61	1,199.85	713.77	486.07	2.468			
17,700.00	7,950.00	17,337.23	7,950.00	246.73	245.79	90.00	-1,892.16	-8,477.61	1,199.85	708.45	491.40	2.442			
17,800.00	7,950.00	17,437.23	7,950.00	249.39	248.46	90.00	-1,892.27	-8,577.61	1,199.85	703.12	496.73	2.415			
17,900.00	7,950.00	17,537.23	7,950.00	252.04	251.12	90.00	-1,892.39	-8,677.61	1,199.86	697.79	502.06	2.390			
18,000.00	7,950.00	17,637.23	7,950.00	254.70	253.79	90.00	-1,892.50	-8,777.61	1,199.86	692.46	507.40	2.365			
18,100.00	7,950.00	17,737.23	7,950.00	257.36	256.45	90.00	-1,892.62	-8,877.61	1,199.86	687.13	512.73	2.340			
18,200.00	7,950.00	17,837.23	7,950.00	260.02	259.12	90.00	-1,892.73	-8,977.61	1,199.87	681.80	518.06	2.316			
18,300.00	7,950.00	17,937.23	7,950.00	262.67	261.79	90.00	-1,892.85	-9,077.61	1,199.87	676.47	523.40	2.292			
18,400.00	7,950.00	18,037.23	7,950.00	265.33	264.45	90.00	-1,892.96	-9,177.61	1,199.87	671.14	528.74	2.269			
18,500.00	7,950.00	18,137.23	7,950.00	267.99	267.12	90.00	-1,893.07	-9,277.61	1,199.88	665.81	534.07	2.247			
18,600.00	7,950.00	18,237.23	7,950.00	270.66	269.79	90.00	-1,893.19	-9,377.61	1,199.88	660.47	539.41	2.224			
18,700.00	7,950.00	18,337.23	7,950.00	273.32	272.46	90.00	-1,893.30	-9,477.61	1,199.89	655.14	544.75	2.203			
18,800.00	7,950.00	18,437.23	7,950.00	275.98	275.13	90.00	-1,893.42	-9,577.61	1,199.89	649.80	550.09	2.181			
18,847.73	7,950.00	18,484.96	7,950.00	277.25	276.40	90.00	-1,893.47	-9,625.34	1,199.89	647.25	552.64	2.171 SF			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 4AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-0.32	50.27	-0.28	50.27						
100.00	100.00	100.00	100.00	0.13	0.13	-0.32	50.27	-0.28	50.27	50.00	0.27	186.978			
200.00	200.00	200.00	200.00	0.49	0.49	-0.32	50.27	-0.28	50.27	49.28	0.99	50.994			
250.00	250.00	250.00	250.00	0.67	0.67	-0.32	50.27	-0.28	50.27	48.93	1.34	37.396 CC			
300.00	300.00	300.84	300.84	0.84	0.85	-163.68	49.84	-0.13	50.27	48.58	1.69	29.745			
400.00	399.93	402.52	402.45	1.19	1.19	-163.43	46.45	1.11	50.28	47.91	2.37	21.178			
500.00	499.68	504.19	503.86	1.54	1.56	-162.93	39.68	3.57	50.30	47.22	3.08	16.343			
600.00	599.13	605.86	604.95	1.92	1.94	-162.19	29.52	7.26	50.34	46.54	3.79	13.273			
700.00	698.15	707.52	705.58	2.32	2.35	-161.20	16.01	12.18	50.40	45.88	4.52	11.151			
800.00	796.63	809.16	805.62	2.74	2.79	-159.97	-0.85	18.31	50.50	45.23	5.26	9.592			
900.00	894.44	910.79	904.95	3.20	3.26	-158.50	-21.04	25.64	50.65	44.62	6.03	8.400			
1,000.00	991.46	1,012.41	1,003.44	3.70	3.77	-156.81	-44.51	34.18	50.86	44.03	6.83	7.446			
1,100.00	1,087.58	1,114.00	1,100.96	4.24	4.33	-154.90	-71.25	43.90	51.16	43.49	7.67	6.671			
1,200.00	1,182.68	1,215.57	1,197.39	4.83	4.93	-152.78	-101.22	54.79	51.55	42.99	8.57	6.018			
1,300.00	1,276.65	1,316.68	1,292.25	5.46	5.57	-150.58	-134.10	66.75	52.19	42.64	9.54	5.469 ES			
1,400.00	1,369.36	1,416.63	1,385.70	6.14	6.24	-149.78	-167.42	78.86	55.12	44.57	10.55	5.224			
1,471.15	1,434.50	1,487.66	1,452.11	6.66	6.71	-150.29	-191.10	87.47	59.06	47.81	11.24	5.253			
1,500.00	1,460.77	1,516.45	1,479.03	6.87	6.91	-150.66	-200.70	90.96	60.96	49.45	11.52	5.294			
1,600.00	1,551.82	1,616.22	1,572.31	7.62	7.59	-151.79	-233.96	103.06	67.59	55.12	12.47	5.421			
1,700.00	1,642.88	1,715.99	1,665.59	8.38	8.27	-152.71	-267.23	115.15	74.24	60.81	13.42	5.530			
1,800.00	1,733.93	1,815.76	1,758.88	9.15	8.96	-153.48	-300.49	127.24	80.90	66.52	14.38	5.625			
1,900.00	1,824.98	1,915.54	1,852.16	9.93	9.65	-154.13	-333.75	139.34	87.58	72.23	15.35	5.707			
2,000.00	1,916.03	2,015.31	1,945.44	10.71	10.35	-154.69	-367.01	151.43	94.27	77.96	16.31	5.780			
2,100.00	2,007.08	2,115.08	2,038.73	11.49	11.05	-155.18	-400.28	163.52	100.96	83.68	17.28	5.844			
2,200.00	2,098.13	2,214.85	2,132.01	12.28	11.75	-155.60	-433.54	175.62	107.66	89.42	18.24	5.901			
2,300.00	2,189.19	2,314.63	2,225.30	13.07	12.45	-155.98	-466.80	187.71	114.37	95.15	19.21	5.952			
2,400.00	2,280.24	2,414.40	2,318.58	13.86	13.15	-156.31	-500.07	199.81	121.08	100.89	20.18	5.999			
2,500.00	2,371.29	2,514.17	2,411.86	14.65	13.85	-156.61	-533.33	211.90	127.79	106.63	21.16	6.040			
2,600.00	2,462.34	2,613.94	2,505.15	15.44	14.56	-156.88	-566.59	223.99	134.51	112.38	22.13	6.078			
2,700.00	2,553.39	2,713.71	2,598.43	16.24	15.26	-157.12	-599.86	236.09	141.23	118.13	23.10	6.113			
2,800.00	2,644.45	2,813.49	2,691.71	17.03	15.97	-157.34	-633.12	248.18	147.95	123.87	24.08	6.145			
2,900.00	2,735.50	2,913.26	2,785.00	17.83	16.68	-157.55	-666.38	260.27	154.67	129.62	25.05	6.174			
3,000.00	2,826.55	3,013.03	2,878.28	18.63	17.38	-157.73	-699.64	272.37	161.40	135.37	26.03	6.201			
3,100.00	2,917.60	3,112.80	2,971.56	19.43	18.09	-157.90	-732.91	284.46	168.13	141.12	27.00	6.227			
3,200.00	3,008.65	3,212.58	3,064.85	20.23	18.80	-158.06	-766.17	296.55	174.85	146.88	27.98	6.250			
3,300.00	3,099.70	3,312.35	3,158.13	21.03	19.51	-158.20	-799.43	308.65	181.58	152.63	28.95	6.271			
3,400.00	3,190.76	3,412.12	3,251.41	21.83	20.22	-158.34	-832.70	320.74	188.31	158.38	29.93	6.292			
3,500.00	3,281.81	3,511.89	3,344.70	22.63	20.93	-158.47	-865.96	332.83	195.05	164.14	30.91	6.310			
3,600.00	3,372.86	3,611.66	3,437.98	23.43	21.63	-158.58	-899.22	344.93	201.78	169.89	31.89	6.328			
3,700.00	3,463.91	3,711.44	3,531.27	24.23	22.34	-158.69	-932.49	357.02	208.51	175.65	32.86	6.345			
3,800.00	3,554.96	3,811.21	3,624.55	25.03	23.05	-158.80	-965.75	369.11	215.25	181.40	33.84	6.360			
3,900.00	3,646.01	3,910.98	3,717.83	25.83	23.76	-158.89	-999.01	381.21	221.98	187.16	34.82	6.375			
4,000.00	3,737.07	4,010.75	3,811.12	26.63	24.47	-158.98	-1,032.27	393.30	228.72	192.92	35.80	6.389			
4,100.00	3,828.12	4,110.53	3,904.40	27.43	25.18	-159.07	-1,065.54	405.40	235.45	198.68	36.78	6.402			
4,200.00	3,919.17	4,210.30	3,997.68	28.24	25.90	-159.15	-1,098.80	417.49	242.19	204.43	37.76	6.414			
4,300.00	4,010.22	4,310.07	4,090.97	29.04	26.61	-159.23	-1,132.06	429.58	248.93	210.19	38.74	6.426			
4,400.00	4,101.27	4,409.84	4,184.25	29.84	27.32	-159.30	-1,165.33	441.68	255.66	215.95	39.72	6.437			
4,500.00	4,192.33	4,509.62	4,277.53	30.65	28.03	-159.37	-1,198.59	453.77	262.40	221.71	40.69	6.448			
4,600.00	4,283.38	4,609.39	4,370.82	31.45	28.74	-159.43	-1,231.85	465.86	269.14	227.47	41.67	6.458			
4,700.00	4,374.43	4,709.16	4,464.10	32.25	29.45	-159.50	-1,265.12	477.96	275.88	233.22	42.65	6.468			
4,800.00	4,465.48	4,808.93	4,557.38	33.05	30.16	-159.56	-1,298.38	490.05	282.62	238.98	43.63	6.477			
4,900.00	4,556.53	4,908.70	4,650.67	33.86	30.87	-159.61	-1,331.64	502.14	289.36	244.74	44.61	6.486			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,647.58	5,008.48	4,743.95	34.66	31.58	-159.67	-1,364.90	514.24	296.10	250.50	45.59	6.494		
5,100.00	4,738.64	5,108.25	4,837.24	35.47	32.29	-159.72	-1,398.17	526.33	302.84	256.26	46.57	6.502		
5,200.00	4,829.69	5,208.02	4,930.52	36.27	33.01	-159.77	-1,431.43	538.42	309.57	262.02	47.55	6.510		
5,300.00	4,920.74	5,307.79	5,023.80	37.07	33.72	-159.82	-1,464.69	550.52	316.32	267.78	48.53	6.517		
5,400.00	5,011.79	5,407.57	5,117.09	37.88	34.43	-159.86	-1,497.96	562.61	323.06	273.54	49.52	6.524		
5,500.00	5,102.84	5,507.34	5,210.37	38.68	35.14	-159.90	-1,531.22	574.70	329.80	279.30	50.50	6.531		
5,600.00	5,193.89	5,607.11	5,303.65	39.48	35.85	-159.95	-1,564.48	586.80	336.54	285.06	51.48	6.538		
5,700.00	5,284.95	5,706.88	5,396.94	40.29	36.56	-159.99	-1,597.75	598.89	343.28	290.82	52.46	6.544		
5,800.00	5,376.00	5,806.65	5,490.22	41.09	37.28	-160.02	-1,631.01	610.99	350.02	296.58	53.44	6.550		
5,900.00	5,467.05	5,906.43	5,583.50	41.90	37.99	-160.06	-1,664.27	623.08	356.76	302.34	54.42	6.556		
6,000.00	5,558.10	6,006.20	5,676.79	42.70	38.70	-160.10	-1,697.53	635.17	363.50	308.10	55.40	6.561		
6,100.00	5,649.15	6,105.97	5,770.07	43.51	39.41	-160.13	-1,730.80	647.27	370.24	313.86	56.38	6.567		
6,200.00	5,740.21	6,205.74	5,863.35	44.31	40.12	-160.16	-1,764.06	659.36	376.98	319.62	57.36	6.572		
6,300.00	5,831.26	6,305.52	5,956.64	45.11	40.84	-160.20	-1,797.32	671.45	383.72	325.38	58.34	6.577		
6,400.00	5,922.31	6,405.29	6,049.92	45.92	41.55	-160.23	-1,830.59	683.55	390.47	331.14	59.32	6.582		
6,500.00	6,013.36	6,505.06	6,143.21	46.72	42.26	-160.26	-1,863.85	695.64	397.21	336.90	60.30	6.587		
6,600.00	6,104.41	6,604.83	6,236.49	47.53	42.97	-160.29	-1,897.11	707.73	403.95	342.66	61.29	6.591		
6,700.00	6,195.46	6,704.61	6,329.77	48.33	43.68	-160.31	-1,930.38	719.83	410.69	348.43	62.27	6.596		
6,800.00	6,286.52	6,804.38	6,423.06	49.14	44.40	-160.34	-1,963.64	731.92	417.43	354.19	63.25	6.600		
6,900.00	6,377.57	6,904.15	6,516.34	49.94	45.11	-160.37	-1,996.90	744.01	424.18	359.95	64.23	6.604		
7,000.00	6,468.62	7,003.92	6,609.62	50.75	45.82	-160.39	-2,030.16	756.11	430.92	365.71	65.21	6.608		
7,100.00	6,559.67	7,103.69	6,702.91	51.55	46.53	-160.42	-2,063.43	768.20	437.66	371.47	66.19	6.612		
7,200.00	6,650.72	7,203.47	6,796.19	52.36	47.25	-160.44	-2,096.69	780.29	444.40	377.23	67.17	6.616		
7,300.00	6,741.77	7,303.24	6,889.47	53.16	47.96	-160.46	-2,129.95	792.39	451.15	382.99	68.15	6.619		
7,400.00	6,832.83	7,403.01	6,982.76	53.97	48.67	-160.49	-2,163.22	804.48	457.89	388.75	69.14	6.623		
7,500.00	6,923.88	7,502.78	7,076.04	54.77	49.38	-160.51	-2,196.48	816.57	464.63	394.51	70.12	6.626		
7,600.00	7,014.93	7,602.56	7,169.32	55.58	50.10	-160.53	-2,229.74	828.67	471.37	400.28	71.10	6.630		
7,700.00	7,105.98	7,702.33	7,262.61	56.38	50.81	-160.55	-2,263.01	840.76	478.12	406.04	72.08	6.633		
7,800.00	7,197.03	7,806.68	7,360.67	57.19	51.50	-161.52	-2,297.98	845.34	484.41	411.91	72.49	6.682		
7,900.00	7,288.09	7,905.54	7,452.84	57.99	52.03	-164.44	-2,330.88	832.27	490.52	418.74	71.77	6.834		
7,982.08	7,362.82	7,978.87	7,519.11	58.65	52.33	-167.76	-2,354.54	811.80	497.10	426.28	70.82	7.019		
8,000.00	7,379.16	7,993.92	7,532.37	58.79	52.39	-172.58	-2,359.28	806.50	498.89	428.27	70.62	7.065		
8,050.00	7,424.95	8,035.09	7,567.93	59.18	52.52	-173.49	-2,371.98	790.12	504.49	434.34	70.15	7.192		
8,100.00	7,470.74	8,075.20	7,601.42	59.53	52.63	-159.66	-2,383.95	771.59	510.86	441.07	69.80	7.319		
8,150.00	7,516.17	8,114.40	7,632.90	59.84	52.73	146.83	-2,395.20	751.13	517.85	448.33	69.52	7.449		
8,200.00	7,560.91	8,152.79	7,662.37	60.13	52.81	135.55	-2,405.74	728.91	525.28	456.01	69.27	7.583		
8,250.00	7,604.61	8,190.48	7,689.89	60.38	52.87	125.96	-2,415.58	705.11	533.00	463.98	69.02	7.722		
8,300.00	7,646.94	8,227.56	7,715.45	60.60	52.92	117.93	-2,424.73	679.88	540.86	472.10	68.76	7.866		
8,350.00	7,687.58	8,264.11	7,739.10	60.78	52.96	111.23	-2,433.20	653.34	548.70	480.23	68.47	8.014		
8,400.00	7,726.22	8,300.00	7,760.72	60.94	52.98	105.65	-2,440.94	625.76	556.40	488.24	68.15	8.164		
8,450.00	7,762.57	8,335.85	7,780.65	61.07	53.00	100.96	-2,448.09	596.84	563.82	495.98	67.84	8.311		
8,500.00	7,796.34	8,371.16	7,798.59	61.18	53.00	97.03	-2,454.52	567.11	570.87	503.33	67.54	8.452		
8,550.00	7,827.28	8,406.17	7,814.63	61.26	53.00	93.73	-2,460.27	536.54	577.43	510.15	67.28	8.583		
8,600.00	7,855.16	8,440.92	7,828.78	61.31	52.99	90.98	-2,465.36	505.22	583.42	516.33	67.09	8.696		
8,650.00	7,879.76	8,475.45	7,841.04	61.35	52.97	88.70	-2,469.77	473.25	588.76	521.76	67.00	8.787		
8,700.00	7,900.90	8,509.79	7,851.42	61.37	52.94	86.85	-2,473.51	440.73	593.39	526.36	67.03	8.852		
8,750.00	7,918.42	8,543.99	7,859.91	61.37	52.91	85.38	-2,476.58	407.75	597.25	530.03	67.22	8.885		
8,800.00	7,932.18	8,578.06	7,866.52	61.35	52.87	84.27	-2,478.97	374.41	600.30	532.72	67.57	8.884		
8,850.00	7,942.07	8,612.05	7,871.23	61.31	52.83	83.48	-2,480.69	340.80	602.49	534.40	68.10	8.847		
8,900.00	7,948.03	8,650.00	7,874.27	61.26	52.78	83.01	-2,481.82	303.00	603.84	535.12	68.71	8.788		
8,949.68	7,950.00	8,679.95	7,875.00	61.20	52.74	82.87	-2,482.11	273.39	604.26	534.59	69.67	8.673		
9,000.00	7,950.00	8,729.94	7,875.00	61.14	52.66	82.87	-2,482.17	223.07	604.26	533.99	70.27	8.599		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 4AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,100.00	7,950.00	8,829.94	7,875.00	61.03	52.52	82.87	-2,482.28	123.07	604.26	532.55	71.71	8.426			
9,200.00	7,950.00	8,929.94	7,875.00	60.93	52.41	82.87	-2,482.40	23.07	604.27	530.74	73.52	8.219			
9,300.00	7,950.00	9,029.94	7,875.00	60.85	52.32	82.87	-2,482.51	-76.93	604.27	528.61	75.66	7.986			
9,400.00	7,950.00	9,129.94	7,875.00	60.80	52.25	82.87	-2,482.62	-176.93	604.27	526.16	78.11	7.736			
9,500.00	7,950.00	9,229.94	7,875.00	60.77	52.20	82.87	-2,482.74	-276.93	604.28	523.43	80.84	7.475			
9,600.00	7,950.00	9,329.94	7,875.00	60.76	52.20	82.87	-2,482.85	-376.93	604.28	520.45	83.83	7.209			
9,700.00	7,950.00	9,429.94	7,875.00	60.79	52.26	82.87	-2,482.97	-476.93	604.28	517.25	87.04	6.943			
9,800.00	7,950.00	9,529.94	7,875.00	60.86	52.41	82.87	-2,483.08	-576.93	604.29	513.84	90.45	6.681			
9,900.00	7,950.00	9,629.94	7,875.00	60.99	52.74	82.87	-2,483.20	-676.93	604.29	510.25	94.04	6.426			
10,000.00	7,950.00	9,729.94	7,875.00	61.21	53.40	82.87	-2,483.31	-776.93	604.29	506.50	97.79	6.179			
10,100.00	7,950.00	9,829.94	7,875.00	61.56	54.51	82.87	-2,483.42	-876.93	604.30	502.61	101.69	5.943			
10,200.00	7,950.00	9,929.94	7,875.00	62.08	56.04	82.87	-2,483.54	-976.93	604.30	498.59	105.71	5.716			
10,300.00	7,950.00	10,029.94	7,875.00	62.87	57.85	82.87	-2,483.65	-1,076.93	604.31	494.46	109.85	5.501			
10,400.00	7,950.00	10,129.94	7,875.00	63.95	59.82	82.87	-2,483.77	-1,176.93	604.31	490.22	114.09	5.297			
10,500.00	7,950.00	10,229.94	7,875.00	65.35	61.89	82.87	-2,483.88	-1,276.93	604.31	485.90	118.41	5.103			
10,600.00	7,950.00	10,329.94	7,875.00	67.00	64.03	82.87	-2,484.00	-1,376.93	604.32	481.50	122.82	4.920			
10,700.00	7,950.00	10,429.94	7,875.00	68.85	66.23	82.87	-2,484.11	-1,476.93	604.32	477.02	127.30	4.747			
10,800.00	7,950.00	10,529.94	7,875.00	70.83	68.48	82.87	-2,484.22	-1,576.93	604.32	472.48	131.84	4.584			
10,900.00	7,950.00	10,629.94	7,875.00	72.91	70.76	82.87	-2,484.34	-1,676.93	604.33	467.88	136.45	4.429			
11,000.00	7,950.00	10,729.94	7,875.00	75.07	73.07	82.87	-2,484.45	-1,776.93	604.33	463.23	141.10	4.283			
11,100.00	7,950.00	10,829.94	7,875.00	77.28	75.41	82.87	-2,484.57	-1,876.93	604.33	458.53	145.80	4.145			
11,200.00	7,950.00	10,929.94	7,875.00	79.54	77.77	82.87	-2,484.68	-1,976.93	604.34	453.79	150.55	4.014			
11,300.00	7,950.00	11,029.94	7,875.00	81.83	80.16	82.87	-2,484.80	-2,076.93	604.34	449.01	155.33	3.891			
11,400.00	7,950.00	11,129.94	7,875.00	84.16	82.56	82.87	-2,484.91	-2,176.93	604.34	444.19	160.15	3.774			
11,500.00	7,950.00	11,229.94	7,875.00	86.51	84.98	82.87	-2,485.02	-2,276.93	604.35	439.34	165.01	3.663			
11,600.00	7,950.00	11,329.94	7,875.00	88.89	87.42	82.87	-2,485.14	-2,376.93	604.35	434.46	169.89	3.557			
11,700.00	7,950.00	11,429.94	7,875.00	91.29	89.87	82.87	-2,485.25	-2,476.93	604.36	429.56	174.80	3.457			
11,800.00	7,950.00	11,529.94	7,875.00	93.71	92.34	82.87	-2,485.37	-2,576.93	604.36	424.63	179.73	3.363			
11,900.00	7,950.00	11,629.94	7,875.00	96.14	94.81	82.87	-2,485.48	-2,676.92	604.36	419.67	184.69	3.272			
12,000.00	7,950.00	11,729.94	7,875.00	98.59	97.30	82.87	-2,485.59	-2,776.92	604.37	414.70	189.67	3.186			
12,100.00	7,950.00	11,829.94	7,875.00	101.05	99.80	82.87	-2,485.71	-2,876.92	604.37	409.70	194.67	3.105			
12,200.00	7,950.00	11,929.94	7,875.00	103.52	102.31	82.87	-2,485.82	-2,976.92	604.37	404.69	199.69	3.027			
12,300.00	7,950.00	12,029.94	7,875.00	106.01	104.83	82.87	-2,485.94	-3,076.92	604.38	399.66	204.72	2.952			
12,400.00	7,950.00	12,129.94	7,875.00	108.50	107.35	82.87	-2,486.05	-3,176.92	604.38	394.61	209.77	2.881			
12,500.00	7,950.00	12,229.94	7,875.00	111.01	109.89	82.87	-2,486.17	-3,276.92	604.38	389.55	214.83	2.813			
12,600.00	7,950.00	12,329.94	7,875.00	113.52	112.43	82.87	-2,486.28	-3,376.92	604.39	384.48	219.91	2.748			
12,700.00	7,950.00	12,429.94	7,875.00	116.04	114.97	82.87	-2,486.39	-3,476.92	604.39	379.39	225.00	2.686			
12,800.00	7,950.00	12,529.94	7,875.00	118.57	117.53	82.87	-2,486.51	-3,576.92	604.40	374.30	230.10	2.627			
12,900.00	7,950.00	12,629.94	7,875.00	121.11	120.09	82.87	-2,486.62	-3,676.92	604.40	369.19	235.21	2.570			
13,000.00	7,950.00	12,729.94	7,875.00	123.65	122.65	82.87	-2,486.74	-3,776.92	604.40	364.07	240.33	2.515			
13,100.00	7,950.00	12,829.94	7,875.00	126.20	125.22	82.87	-2,486.85	-3,876.92	604.41	358.94	245.47	2.462			
13,200.00	7,950.00	12,929.94	7,875.00	128.75	127.80	82.87	-2,486.97	-3,976.92	604.41	353.80	250.61	2.412			
13,300.00	7,950.00	13,029.94	7,875.00	131.31	130.37	82.87	-2,487.08	-4,076.92	604.41	348.66	255.76	2.363			
13,400.00	7,950.00	13,129.94	7,875.00	133.88	132.96	82.87	-2,487.19	-4,176.92	604.42	343.50	260.91	2.317			
13,500.00	7,950.00	13,229.94	7,875.00	136.45	135.55	82.87	-2,487.31	-4,276.92	604.42	338.34	266.08	2.272			
13,600.00	7,950.00	13,329.94	7,875.00	139.02	138.14	82.87	-2,487.42	-4,376.92	604.42	333.17	271.25	2.228			
13,700.00	7,950.00	13,429.94	7,875.00	141.60	140.73	82.87	-2,487.54	-4,476.92	604.43	328.00	276.43	2.187			
13,800.00	7,950.00	13,529.94	7,875.00	144.19	143.33	82.87	-2,487.65	-4,576.92	604.43	322.82	281.62	2.146			
13,900.00	7,950.00	13,629.94	7,875.00	146.77	145.93	82.87	-2,487.77	-4,676.92	604.44	317.63	286.81	2.107			
14,000.00	7,950.00	13,729.94	7,875.00	149.36	148.54	82.87	-2,487.88	-4,776.92	604.44	312.44	292.00	2.070			
14,100.00	7,950.00	13,829.94	7,875.00	151.96	151.15	82.87	-2,487.99	-4,876.92	604.44	307.24	297.21	2.034			
14,200.00	7,950.00	13,929.94	7,875.00	154.56	153.76	82.87	-2,488.11	-4,976.92	604.45	302.03	302.41	1.999			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - LONE TREE 4-65 15-16 4AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,300.00	7,950.00	14,029.94	7,875.00	157.16	156.37	82.87	-2,488.22	-5,076.92	604.45	296.83	307.62	1.965			
14,400.00	7,950.00	14,129.94	7,875.00	159.76	158.99	82.87	-2,488.34	-5,176.92	604.45	291.61	312.84	1.932			
14,500.00	7,950.00	14,229.94	7,875.00	162.37	161.61	82.87	-2,488.45	-5,276.92	604.46	286.40	318.06	1.900			
14,600.00	7,950.00	14,329.94	7,875.00	164.98	164.23	82.87	-2,488.56	-5,376.92	604.46	281.17	323.29	1.870			
14,700.00	7,950.00	14,429.94	7,875.00	167.59	166.85	82.87	-2,488.68	-5,476.92	604.46	275.95	328.52	1.840			
14,800.00	7,950.00	14,529.94	7,875.00	170.20	169.48	82.87	-2,488.79	-5,576.92	604.47	270.72	333.75	1.811			
14,900.00	7,950.00	14,629.94	7,875.00	172.82	172.10	82.87	-2,488.91	-5,676.92	604.47	265.49	338.99	1.783			
15,000.00	7,950.00	14,729.94	7,875.00	175.44	174.73	82.87	-2,489.02	-5,776.92	604.48	260.25	344.22	1.756			
15,100.00	7,950.00	14,829.94	7,875.00	178.06	177.36	82.87	-2,489.14	-5,876.92	604.48	255.01	349.47	1.730			
15,200.00	7,950.00	14,929.94	7,875.00	180.68	179.99	82.87	-2,489.25	-5,976.92	604.48	249.77	354.71	1.704			
15,300.00	7,950.00	15,029.94	7,875.00	183.31	182.63	82.87	-2,489.36	-6,076.92	604.49	244.52	359.96	1.679			
15,400.00	7,950.00	15,129.94	7,875.00	185.93	185.26	82.87	-2,489.48	-6,176.92	604.49	239.27	365.22	1.655			
15,500.00	7,950.00	15,229.94	7,875.00	188.56	187.90	82.87	-2,489.59	-6,276.92	604.49	234.02	370.47	1.632			
15,600.00	7,950.00	15,329.94	7,875.00	191.19	190.54	82.87	-2,489.71	-6,376.92	604.50	228.77	375.73	1.609			
15,700.00	7,950.00	15,429.94	7,875.00	193.82	193.18	82.87	-2,489.82	-6,476.92	604.50	223.51	380.99	1.587			
15,800.00	7,950.00	15,529.94	7,875.00	196.46	195.82	82.87	-2,489.94	-6,576.92	604.50	218.25	386.25	1.565			
15,900.00	7,950.00	15,629.94	7,875.00	199.09	198.47	82.87	-2,490.05	-6,676.92	604.51	212.99	391.51	1.544			
16,000.00	7,950.00	15,729.94	7,875.00	201.73	201.11	82.87	-2,490.16	-6,776.92	604.51	207.73	396.78	1.524			
16,100.00	7,950.00	15,829.94	7,875.00	204.37	203.76	82.87	-2,490.28	-6,876.92	604.52	202.46	402.05	1.504			
16,200.00	7,950.00	15,929.94	7,875.00	207.01	206.40	82.87	-2,490.39	-6,976.92	604.52	197.20	407.32	1.484	Level 3		
16,300.00	7,950.00	16,029.94	7,875.00	209.65	209.05	82.87	-2,490.51	-7,076.92	604.52	191.93	412.59	1.465	Level 3		
16,400.00	7,950.00	16,129.94	7,875.00	212.29	211.70	82.87	-2,490.62	-7,176.92	604.53	186.66	417.87	1.447	Level 3		
16,500.00	7,950.00	16,229.94	7,875.00	214.93	214.35	82.87	-2,490.73	-7,276.92	604.53	181.38	423.15	1.429	Level 3		
16,600.00	7,950.00	16,329.94	7,875.00	217.58	217.00	82.87	-2,490.85	-7,376.92	604.53	176.11	428.43	1.411	Level 3		
16,700.00	7,950.00	16,429.94	7,875.00	220.22	219.65	82.87	-2,490.96	-7,476.92	604.54	170.83	433.71	1.394	Level 3		
16,800.00	7,950.00	16,529.94	7,875.00	222.87	222.31	82.87	-2,491.08	-7,576.92	604.54	165.55	438.99	1.377	Level 3		
16,900.00	7,950.00	16,629.94	7,875.00	225.52	224.96	82.87	-2,491.19	-7,676.92	604.54	160.27	444.27	1.361	Level 3		
17,000.00	7,950.00	16,729.94	7,875.00	228.16	227.61	82.87	-2,491.31	-7,776.92	604.55	154.99	449.56	1.345	Level 3		
17,100.00	7,950.00	16,829.94	7,875.00	230.81	230.27	82.87	-2,491.42	-7,876.92	604.55	149.71	454.84	1.329	Level 3		
17,200.00	7,950.00	16,929.94	7,875.00	233.46	232.93	82.87	-2,491.53	-7,976.92	604.56	144.43	460.13	1.314	Level 3		
17,300.00	7,950.00	17,029.94	7,875.00	236.12	235.58	82.87	-2,491.65	-8,076.92	604.56	139.14	465.42	1.299	Level 3		
17,400.00	7,950.00	17,129.94	7,875.00	238.77	238.24	82.87	-2,491.76	-8,176.92	604.56	133.85	470.71	1.284	Level 3		
17,500.00	7,950.00	17,229.94	7,875.00	241.42	240.90	82.87	-2,491.88	-8,276.92	604.57	128.56	476.00	1.270	Level 3		
17,600.00	7,950.00	17,329.94	7,875.00	244.08	243.56	82.87	-2,491.99	-8,376.92	604.57	123.27	481.29	1.256	Level 3		
17,700.00	7,950.00	17,429.94	7,875.00	246.73	246.22	82.87	-2,492.11	-8,476.92	604.57	117.98	486.59	1.242	Level 2		
17,800.00	7,950.00	17,529.94	7,875.00	249.39	248.88	82.87	-2,492.22	-8,576.92	604.58	112.69	491.88	1.229	Level 2		
17,900.00	7,950.00	17,629.94	7,875.00	252.04	251.54	82.87	-2,492.33	-8,676.92	604.58	107.40	497.18	1.216	Level 2		
18,000.00	7,950.00	17,729.94	7,875.00	254.70	254.20	82.87	-2,492.45	-8,776.92	604.58	102.11	502.48	1.203	Level 2		
18,100.00	7,950.00	17,829.94	7,875.00	257.36	256.86	82.87	-2,492.56	-8,876.92	604.59	96.81	507.78	1.191	Level 2		
18,200.00	7,950.00	17,929.94	7,875.00	260.02	259.53	82.87	-2,492.68	-8,976.92	604.59	91.51	513.08	1.178	Level 2		
18,300.00	7,950.00	18,029.94	7,875.00	262.67	262.19	82.87	-2,492.79	-9,076.92	604.60	86.22	518.38	1.166	Level 2		
18,400.00	7,950.00	18,129.94	7,875.00	265.33	264.86	82.87	-2,492.91	-9,176.92	604.60	80.92	523.68	1.155	Level 2		
18,500.00	7,950.00	18,229.94	7,875.00	267.99	267.52	82.87	-2,493.02	-9,276.92	604.60	75.62	528.98	1.143	Level 2		
18,600.00	7,950.00	18,329.94	7,875.00	270.66	270.19	82.87	-2,493.13	-9,376.92	604.61	70.32	534.29	1.132	Level 2		
18,700.00	7,950.00	18,429.94	7,875.00	273.32	272.85	82.87	-2,493.25	-9,476.92	604.61	65.02	539.59	1.120	Level 2		
18,800.00	7,950.00	18,529.94	7,875.00	275.98	275.52	82.87	-2,493.36	-9,576.92	604.61	59.72	544.90	1.110	Level 2		
18,847.73	7,950.00	18,577.67	7,875.00	277.25	276.79	82.87	-2,493.42	-9,624.65	604.61	57.19	547.43	1.104	Level 2, SF		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 1AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	5.30	5.30	0.00	0.01	-0.12	275.02	-0.56	275.02						
100.00	100.00	105.30	105.30	0.13	0.15	-0.12	275.02	-0.56	275.02	274.73	0.29	955.427			
200.00	200.00	205.30	205.30	0.49	0.51	-0.12	275.02	-0.56	275.02	274.02	1.00	273.710			
206.36	206.36	211.66	211.66	0.52	0.53	-0.12	275.02	-0.56	275.02	273.97	1.05	261.833 CC			
250.00	250.00	254.86	254.86	0.67	0.69	-0.12	275.03	-0.56	275.03	273.67	1.36	201.970 ES			
300.00	300.00	300.67	300.67	0.84	0.85	-163.50	275.45	-0.42	275.90	274.21	1.70	162.373			
400.00	399.93	392.01	391.95	1.19	1.18	-163.45	278.36	0.54	282.44	280.06	2.38	118.803			
500.00	499.68	482.52	482.27	1.54	1.51	-163.36	283.97	2.40	295.30	292.23	3.07	96.232			
600.00	599.13	571.68	571.00	1.92	1.84	-163.24	292.15	5.11	314.39	310.63	3.76	83.640			
700.00	698.15	658.99	657.61	2.32	2.18	-163.09	302.69	8.61	339.60	335.16	4.44	76.426			
800.00	796.63	747.31	744.84	2.74	2.54	-162.92	315.74	12.93	370.61	365.48	5.13	72.224			
900.00	894.44	841.05	837.34	3.20	2.93	-162.85	330.19	17.72	405.40	399.55	5.85	69.344			
1,000.00	991.46	933.57	928.63	3.70	3.32	-162.87	344.45	22.45	443.30	436.73	6.56	67.536			
1,100.00	1,087.58	1,024.75	1,018.60	4.24	3.71	-162.96	358.50	27.11	484.27	476.99	7.28	66.543			
1,200.00	1,182.68	1,114.47	1,107.13	4.83	4.10	-163.09	372.33	31.69	528.28	520.29	7.99	66.077			
1,300.00	1,276.65	1,202.64	1,194.13	5.46	4.48	-163.25	385.92	36.19	575.29	566.58	8.71	66.042			
1,400.00	1,369.36	1,289.14	1,279.48	6.14	4.86	-163.42	399.25	40.61	625.26	615.84	9.43	66.340			
1,471.15	1,434.50	1,349.61	1,339.15	6.66	5.12	-163.54	408.57	43.70	662.58	652.65	9.93	66.701			
1,500.00	1,460.77	1,373.94	1,363.16	6.87	5.23	-163.69	412.32	44.94	678.01	667.88	10.14	66.868			
1,600.00	1,551.82	1,458.28	1,446.38	7.62	5.60	-164.15	425.32	49.25	731.52	720.69	10.84	67.493			
1,700.00	1,642.88	1,542.62	1,529.60	8.38	5.97	-164.55	438.32	53.56	785.06	773.52	11.54	68.015			
1,800.00	1,733.93	1,626.96	1,612.82	9.15	6.33	-164.90	451.32	57.87	838.63	826.38	12.25	68.458			
1,900.00	1,824.98	1,711.30	1,696.04	9.93	6.71	-165.21	464.32	62.18	892.21	879.25	12.96	68.835			
2,000.00	1,916.03	1,804.36	1,779.26	10.71	7.11	-165.48	477.32	66.49	945.81	932.10	13.71	68.991			
2,100.00	2,007.08	1,879.98	1,862.49	11.49	7.45	-165.73	490.32	70.79	999.43	985.03	14.39	69.443			
2,200.00	2,098.13	1,964.32	1,945.71	12.28	7.82	-165.95	503.31	75.10	1,053.05	1,037.94	15.11	69.689			
2,300.00	2,189.19	2,048.67	2,028.93	13.07	8.19	-166.14	516.31	79.41	1,106.69	1,090.86	15.83	69.906			
2,400.00	2,280.24	2,133.01	2,112.15	13.86	8.56	-166.32	529.31	83.72	1,160.33	1,143.78	16.55	70.099			
2,500.00	2,371.29	2,217.35	2,195.37	14.65	8.93	-166.49	542.31	88.03	1,213.98	1,196.70	17.28	70.270			
2,600.00	2,462.34	2,301.69	2,278.59	15.44	9.31	-166.64	555.31	92.34	1,267.64	1,249.64	18.00	70.422			
2,700.00	2,553.39	2,386.03	2,361.81	16.24	9.68	-166.78	568.31	96.64	1,321.30	1,302.58	18.73	70.559			
2,800.00	2,644.45	2,470.37	2,445.04	17.03	10.05	-166.90	581.31	100.95	1,374.97	1,355.52	19.45	70.683			
2,900.00	2,735.50	2,554.71	2,528.26	17.83	10.42	-167.02	594.31	105.26	1,428.64	1,408.46	20.18	70.795			
3,000.00	2,826.55	2,639.05	2,611.48	18.63	10.80	-167.13	607.30	109.57	1,482.32	1,461.41	20.91	70.896			
3,100.00	2,917.60	2,723.39	2,694.70	19.43	11.17	-167.23	620.30	113.88	1,536.00	1,514.36	21.64	70.989			
3,200.00	3,008.65	2,807.73	2,777.92	20.23	11.54	-167.33	633.30	118.19	1,589.68	1,567.32	22.37	71.073			
3,300.00	3,099.70	2,907.93	2,861.14	21.03	11.99	-167.41	646.30	122.49	1,643.37	1,620.21	23.16	70.961			
3,400.00	3,190.76	2,976.41	2,944.36	21.83	12.29	-167.50	659.30	126.80	1,697.06	1,673.23	23.83	71.220			
3,500.00	3,281.81	3,060.75	3,027.59	22.63	12.66	-167.57	672.30	131.11	1,750.75	1,726.19	24.56	71.285			
3,600.00	3,372.86	3,145.09	3,110.81	23.43	13.04	-167.65	685.30	135.42	1,804.44	1,779.15	25.29	71.345			
3,700.00	3,463.91	3,229.43	3,194.03	24.23	13.41	-167.72	698.30	139.73	1,858.14	1,832.12	26.02	71.400			
3,800.00	3,554.96	3,313.77	3,277.25	25.03	13.78	-167.78	711.29	144.04	1,911.84	1,885.08	26.76	71.451			
3,900.00	3,646.01	3,401.89	3,360.47	25.83	14.17	-167.84	724.29	148.34	1,965.54	1,938.03	27.51	71.460			
4,000.00	3,737.07	3,482.46	3,443.69	26.63	14.53	-167.90	737.29	152.65	2,019.24	1,991.01	28.22	71.542			
4,100.00	3,828.12	3,566.80	3,526.91	27.43	14.90	-167.96	750.29	156.96	2,072.94	2,043.98	28.96	71.582			
4,200.00	3,919.17	3,651.14	3,610.14	28.24	15.28	-168.01	763.29	161.27	2,126.64	2,096.95	29.69	71.619			
4,300.00	4,010.22	3,735.48	3,693.36	29.04	15.65	-168.06	776.29	165.58	2,180.35	2,149.92	30.43	71.654			
4,400.00	4,101.27	3,819.82	3,776.58	29.84	16.02	-168.11	789.29	169.89	2,234.05	2,202.89	31.16	71.686			
4,500.00	4,192.33	3,904.16	3,859.80	30.65	16.40	-168.15	802.29	174.19	2,287.76	2,255.86	31.90	71.716			
4,600.00	4,283.38	3,988.50	3,943.02	31.45	16.77	-168.19	815.28	178.50	2,341.47	2,308.83	32.64	71.744			
4,700.00	4,374.43	4,072.84	4,026.24	32.25	17.14	-168.24	828.28	182.81	2,395.17	2,361.80	33.37	71.770			
4,800.00	4,465.48	4,157.18	4,109.46	33.05	17.52	-168.28	841.28	187.12	2,448.88	2,414.77	34.11	71.794			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 1AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,241.52	4,192.69	33.86	17.89	-168.31	854.28	191.43	2,502.59	2,467.75	34.85	71.817			
5,000.00	4,647.58	4,325.86	4,275.91	34.66	18.26	-168.35	867.28	195.74	2,556.30	2,520.72	35.58	71.837			
5,100.00	4,738.64	4,410.20	4,359.13	35.47	18.64	-168.38	880.28	200.04	2,610.02	2,573.69	36.32	71.857			
5,200.00	4,829.69	4,494.54	4,442.35	36.27	19.01	-168.42	893.28	204.35	2,663.73	2,626.67	37.06	71.874			
5,300.00	4,920.74	4,578.88	4,525.57	37.07	19.39	-168.45	906.28	208.66	2,717.44	2,679.64	37.80	71.891			
5,400.00	5,011.79	4,663.22	4,608.79	37.88	19.76	-168.48	919.28	212.97	2,771.15	2,732.62	38.54	71.906			
5,500.00	5,102.84	4,747.56	4,692.01	38.68	20.13	-168.51	932.27	217.28	2,824.87	2,785.59	39.28	71.921			
5,600.00	5,193.89	4,831.90	4,775.24	39.48	20.51	-168.54	945.27	221.59	2,878.58	2,838.57	40.02	71.934			
5,700.00	5,284.95	4,916.25	4,858.46	40.29	20.88	-168.56	958.27	225.89	2,932.30	2,891.54	40.76	71.946			
5,800.00	5,376.00	5,000.59	4,941.68	41.09	21.25	-168.59	971.27	230.20	2,986.01	2,944.52	41.50	71.957			
5,900.00	5,467.05	5,084.93	5,024.90	41.90	21.63	-168.62	984.27	234.51	3,039.73	2,997.49	42.24	71.967			
6,000.00	5,558.10	5,169.27	5,108.12	42.70	22.00	-168.64	997.27	238.82	3,093.45	3,050.47	42.98	71.976			
6,100.00	5,649.15	5,253.61	5,191.34	43.51	22.38	-168.66	1,010.27	243.13	3,147.16	3,103.44	43.72	71.985			
6,200.00	5,740.21	5,337.95	5,274.56	44.31	22.75	-168.69	1,023.27	247.44	3,200.88	3,156.42	44.46	71.993			
6,300.00	5,831.26	5,422.29	5,357.79	45.11	23.12	-168.71	1,036.26	251.74	3,254.60	3,209.39	45.20	71.999			
6,400.00	5,922.31	5,506.63	5,441.01	45.92	23.50	-168.73	1,049.26	256.05	3,308.31	3,262.37	45.95	72.006			
6,500.00	6,013.36	5,609.03	5,524.23	46.72	23.95	-168.75	1,062.26	260.36	3,362.03	3,315.27	46.76	71.903			
6,600.00	6,104.41	5,675.31	5,607.45	47.53	24.25	-168.77	1,075.26	264.67	3,415.75	3,368.32	47.43	72.016			
6,700.00	6,195.46	5,759.65	5,690.67	48.33	24.62	-168.79	1,088.26	268.98	3,469.47	3,421.30	48.17	72.020			
6,800.00	6,286.52	5,843.99	5,773.89	49.14	24.99	-168.81	1,101.26	273.29	3,523.19	3,474.27	48.92	72.024			
6,900.00	6,377.57	5,928.33	5,857.11	49.94	25.37	-168.83	1,114.26	277.59	3,576.91	3,527.25	49.66	72.027			
7,000.00	6,468.62	6,012.67	5,940.34	50.75	25.74	-168.85	1,127.26	281.90	3,630.63	3,580.22	50.40	72.029			
7,100.00	6,559.67	6,102.99	6,023.56	51.55	26.14	-168.86	1,140.25	286.21	3,684.35	3,633.17	51.17	71.998			
7,200.00	6,650.72	6,181.35	6,106.78	52.36	26.49	-168.88	1,153.25	290.52	3,738.07	3,686.17	51.89	72.033			
7,300.00	6,741.77	6,265.69	6,190.00	53.16	26.86	-168.90	1,166.25	294.83	3,791.79	3,739.15	52.64	72.034			
7,400.00	6,832.83	6,350.04	6,273.22	53.97	27.24	-168.91	1,179.25	299.14	3,845.51	3,792.12	53.38	72.034			
7,500.00	6,923.88	6,434.38	6,356.44	54.77	27.61	-168.93	1,192.25	303.44	3,899.23	3,845.10	54.13	72.034			
7,600.00	7,014.93	6,518.72	6,439.66	55.58	27.98	-168.94	1,205.25	307.75	3,952.95	3,898.07	54.88	72.034			
7,700.00	7,105.98	6,603.06	6,522.89	56.38	28.36	-168.96	1,218.25	312.06	4,006.67	3,951.05	55.62	72.033			
7,800.00	7,197.03	6,687.40	6,606.11	57.19	28.73	-168.97	1,231.25	316.37	4,060.39	4,004.02	56.37	72.031			
7,900.00	7,288.09	6,771.74	6,689.33	57.99	29.11	-168.99	1,244.24	320.68	4,114.11	4,056.99	57.12	72.030			
7,982.08	7,362.82	6,840.96	6,757.64	58.65	29.41	-169.00	1,254.91	324.21	4,158.20	4,100.47	57.73	72.028			
8,000.00	7,379.16	6,856.09	6,772.56	58.79	29.48	-174.01	1,257.25	324.99	4,167.81	4,109.95	57.86	72.028			
8,050.00	7,424.95	6,901.69	6,814.22	59.18	29.68	171.61	1,263.75	327.14	4,194.36	4,136.12	58.24	72.018			
8,100.00	7,470.74	6,940.30	6,855.66	59.53	29.85	157.41	1,270.22	329.29	4,220.39	4,161.81	58.58	72.051			
8,150.00	7,516.17	6,981.75	6,896.56	59.84	30.04	144.30	1,276.61	331.41	4,245.71	4,186.80	58.91	72.076			
8,200.00	7,560.91	7,022.34	6,936.61	60.13	30.22	132.84	1,282.87	333.48	4,270.16	4,210.95	59.22	72.110			
8,250.00	7,604.61	7,061.76	6,975.50	60.38	30.39	123.17	1,288.94	335.49	4,293.62	4,234.11	59.51	72.150			
8,300.00	7,646.94	7,100.29	7,012.95	60.60	30.56	115.13	1,294.79	337.43	4,315.95	4,256.16	59.78	72.193			
8,350.00	7,687.58	7,135.90	7,048.66	60.78	30.72	108.49	1,300.37	339.28	4,337.04	4,277.01	60.03	72.242			
8,400.00	7,726.22	7,170.06	7,082.36	60.94	30.87	103.00	1,305.63	341.02	4,356.80	4,296.53	60.27	72.287			
8,450.00	7,762.57	7,201.92	7,113.80	61.07	31.01	98.45	1,310.55	342.65	4,375.15	4,314.66	60.49	72.325			
8,500.00	7,796.34	7,231.25	7,142.74	61.18	31.14	94.67	1,315.07	344.15	4,392.02	4,331.31	60.71	72.349			
8,550.00	7,827.28	7,257.81	7,168.95	61.26	31.26	91.54	1,319.16	345.51	4,407.35	4,346.44	60.91	72.355			
8,600.00	7,855.16	7,281.42	7,192.25	61.31	31.37	88.94	1,322.80	346.71	4,421.10	4,359.98	61.12	72.334			
8,650.00	7,879.76	7,301.88	7,212.44	61.35	31.46	86.80	1,325.95	347.76	4,433.21	4,371.88	61.33	72.281			
8,700.00	7,900.90	7,319.05	7,229.38	61.37	31.53	85.06	1,328.60	348.64	4,443.67	4,382.11	61.56	72.189			
8,750.00	7,918.42	7,332.79	7,242.94	61.37	31.59	83.67	1,330.72	349.34	4,452.43	4,390.64	61.79	72.053			
8,800.00	7,932.18	7,343.00	7,253.01	61.35	31.64	82.60	1,332.29	349.86	4,459.48	4,397.43	62.05	71.870			
8,850.00	7,942.07	7,349.60	7,259.52	61.31	31.67	81.82	1,333.31	350.20	4,464.79	4,402.47	62.32	71.639			
8,900.00	7,948.03	7,352.53	7,262.42	61.26	31.68	81.31	1,333.76	350.35	4,468.35	4,405.74	62.62	71.361			
8,949.68	7,950.00	7,351.81	7,261.70	61.20	31.68	81.07	1,333.65	350.31	4,470.14	4,407.21	62.92	71.039			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,000.00	7,950.00	7,349.23	7,259.15	61.14	31.67	81.04	1,333.25	350.18	4,471.34	4,408.07	63.26	70.678		
9,100.00	7,950.00	7,344.10	7,254.10	61.03	31.64	80.97	1,332.46	349.92	4,475.39	4,411.34	64.05	69.875		
9,200.00	7,950.00	7,338.97	7,249.04	60.93	31.62	80.91	1,331.67	349.65	4,481.67	4,416.71	64.97	68.986		
9,300.00	7,950.00	7,333.85	7,243.98	60.85	31.60	80.84	1,330.88	349.39	4,490.16	4,424.16	66.00	68.032		
9,400.00	7,950.00	7,328.72	7,238.92	60.80	31.58	80.78	1,330.09	349.13	4,500.86	4,433.72	67.14	67.035		
9,500.00	7,950.00	7,323.59	7,233.86	60.77	31.55	80.71	1,329.30	348.87	4,513.74	4,445.36	68.37	66.017		
9,600.00	7,950.00	7,318.47	7,228.80	60.76	31.53	80.65	1,328.51	348.61	4,528.78	4,459.10	69.68	64.993		
9,700.00	7,950.00	7,313.34	7,223.74	60.79	31.51	80.58	1,327.72	348.34	4,545.97	4,474.91	71.05	63.980		
9,800.00	7,950.00	7,308.21	7,218.69	60.86	31.49	80.51	1,326.93	348.08	4,565.28	4,492.80	72.48	62.988		
9,900.00	7,950.00	7,303.09	7,213.63	60.99	31.46	80.45	1,326.14	347.82	4,586.68	4,512.73	73.95	62.028		
10,000.00	7,950.00	7,302.04	7,208.57	61.21	31.46	80.38	1,325.35	347.56	4,610.15	4,534.69	75.46	61.094		
10,100.00	7,950.00	7,307.16	7,203.51	61.56	31.48	80.32	1,324.56	347.30	4,635.65	4,558.63	77.02	60.188		
10,200.00	7,950.00	7,287.71	7,198.45	62.08	31.39	80.25	1,323.77	347.03	4,663.15	4,584.65	78.50	59.401		
10,300.00	7,950.00	7,282.58	7,193.39	62.87	31.37	80.19	1,322.98	346.77	4,692.61	4,612.57	80.05	58.623		
10,400.00	7,950.00	7,277.46	7,188.34	63.95	31.35	80.12	1,322.19	346.51	4,724.01	4,642.41	81.59	57.898		
10,500.00	7,950.00	7,272.33	7,183.28	65.35	31.33	80.05	1,321.40	346.25	4,757.29	4,674.16	83.13	57.224		
10,600.00	7,950.00	7,267.20	7,178.22	67.00	31.30	79.99	1,320.61	345.99	4,792.42	4,707.76	84.67	56.603		
10,700.00	7,950.00	7,262.08	7,173.16	68.85	31.28	79.92	1,319.82	345.73	4,829.37	4,743.18	86.19	56.034		
10,800.00	7,950.00	7,256.95	7,168.10	70.83	31.26	79.86	1,319.03	345.46	4,868.08	4,780.39	87.69	55.516		
10,900.00	7,950.00	7,251.82	7,163.04	72.91	31.24	79.79	1,318.24	345.20	4,908.52	4,819.35	89.17	55.047		
11,000.00	7,950.00	7,246.70	7,157.99	75.07	31.21	79.73	1,317.45	344.94	4,950.64	4,860.01	90.63	54.625		
11,100.00	7,950.00	7,241.57	7,152.93	77.28	31.19	79.66	1,316.66	344.68	4,994.40	4,902.34	92.06	54.250		
11,200.00	7,950.00	7,236.44	7,147.87	79.54	31.17	79.60	1,315.87	344.42	5,039.77	4,946.30	93.47	53.919		
11,300.00	7,950.00	7,231.32	7,142.81	81.83	31.14	79.53	1,315.08	344.15	5,086.69	4,991.84	94.85	53.630		
11,400.00	7,950.00	7,226.19	7,137.75	84.16	31.12	79.46	1,314.29	343.89	5,135.12	5,038.93	96.20	53.382		
11,500.00	7,950.00	7,221.07	7,132.69	86.51	31.10	79.40	1,313.50	343.63	5,185.03	5,087.52	97.51	53.173		
11,600.00	7,950.00	7,215.94	7,127.64	88.89	31.08	79.33	1,312.71	343.37	5,236.36	5,137.57	98.80	53.001		
11,700.00	7,950.00	7,210.81	7,122.58	91.29	31.05	79.27	1,311.92	343.11	5,289.09	5,189.04	100.05	52.864		
11,800.00	7,950.00	7,205.69	7,117.52	93.71	31.03	79.20	1,311.13	342.84	5,343.16	5,241.89	101.27	52.761		
11,900.00	7,950.00	7,200.56	7,112.46	96.14	31.01	79.14	1,310.34	342.58	5,398.53	5,296.07	102.46	52.690		
12,000.00	7,950.00	7,204.57	7,107.40	98.59	31.03	79.07	1,309.55	342.32	5,455.17	5,351.53	103.65	52.631		
12,100.00	7,950.00	7,209.69	7,102.34	101.05	31.05	79.01	1,308.76	342.06	5,513.04	5,408.23	104.81	52.601 SF		
12,200.00	7,950.00	7,185.18	7,097.28	103.52	30.94	78.94	1,307.97	341.80	5,572.10	5,466.28	105.82	52.654		
12,300.00	7,950.00	7,180.05	7,092.23	106.01	30.92	78.87	1,307.18	341.54	5,632.31	5,525.43	106.88	52.697		
12,400.00	7,950.00	7,174.93	7,087.17	108.50	30.89	78.81	1,306.39	341.27	5,693.64	5,585.73	107.91	52.764		
12,500.00	7,950.00	7,169.80	7,082.11	111.01	30.87	78.74	1,305.60	341.01	5,756.04	5,647.14	108.90	52.855		
12,600.00	7,950.00	7,164.68	7,077.05	113.52	30.85	78.68	1,304.81	340.75	5,819.49	5,709.63	109.86	52.970		
12,700.00	7,950.00	7,159.55	7,071.99	116.04	30.83	78.61	1,304.02	340.49	5,883.95	5,773.15	110.80	53.105		
12,800.00	7,950.00	7,154.42	7,066.93	118.57	30.80	78.55	1,303.22	340.23	5,949.39	5,837.69	111.70	53.261		
12,900.00	7,950.00	7,149.30	7,061.88	121.11	30.78	78.48	1,302.43	339.96	6,015.77	5,903.20	112.58	53.437		
13,000.00	7,950.00	7,144.17	7,056.82	123.65	30.76	78.42	1,301.64	339.70	6,083.07	5,969.65	113.42	53.632		
13,100.00	7,950.00	7,139.04	7,051.76	126.20	30.74	78.35	1,300.85	339.44	6,151.26	6,037.02	114.24	53.844		
13,200.00	7,950.00	7,133.92	7,046.70	128.75	30.71	78.28	1,300.06	339.18	6,220.30	6,105.26	115.03	54.073		
13,300.00	7,950.00	7,128.79	7,041.64	131.31	30.69	78.22	1,299.27	338.92	6,290.17	6,174.37	115.80	54.319		
13,400.00	7,950.00	7,123.66	7,036.58	133.88	30.67	78.15	1,298.48	338.65	6,360.84	6,244.29	116.54	54.580		
13,500.00	7,950.00	7,118.54	7,031.53	136.45	30.64	78.09	1,297.69	338.39	6,432.28	6,315.02	117.26	54.855		
13,600.00	7,950.00	7,113.41	7,026.47	139.02	30.62	78.02	1,296.90	338.13	6,504.47	6,386.52	117.95	55.145		
13,700.00	7,950.00	7,108.28	7,021.41	141.60	30.60	77.96	1,296.11	337.87	6,577.39	6,458.77	118.62	55.448		
13,800.00	7,950.00	7,103.16	7,016.35	144.19	30.58	77.89	1,295.32	337.61	6,651.01	6,531.74	119.27	55.764		
13,900.00	7,950.00	7,101.97	7,011.29	146.77	30.57	77.83	1,294.53	337.35	6,725.30	6,605.39	119.91	56.086		
14,000.00	7,950.00	7,107.10	7,006.23	149.36	30.59	77.76	1,293.74	337.08	6,800.25	6,679.69	120.56	56.407		
14,100.00	7,950.00	7,087.78	7,001.18	151.96	30.51	77.70	1,292.95	336.82	6,875.83	6,754.74	121.09	56.785		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,200.00	7,950.00	7,082.65	6,996.12	154.56	30.49	77.63	1,292.16	336.56	6,952.03	6,830.37	121.65	57.147		
14,300.00	7,950.00	7,077.53	6,991.06	157.16	30.46	77.57	1,291.37	336.30	7,028.81	6,906.62	122.20	57.520		
14,400.00	7,950.00	7,072.40	6,986.00	159.76	30.44	77.50	1,290.58	336.04	7,106.18	6,983.45	122.73	57.902		
14,500.00	7,950.00	7,067.27	6,980.94	162.37	30.42	77.43	1,289.79	335.77	7,184.09	7,060.86	123.24	58.295		
14,600.00	7,950.00	7,062.15	6,975.88	164.98	30.39	77.37	1,289.00	335.51	7,262.55	7,138.82	123.73	58.696		
14,700.00	7,950.00	7,057.02	6,970.82	167.59	30.37	77.30	1,288.21	335.25	7,341.52	7,217.31	124.21	59.106		
14,800.00	7,950.00	7,051.89	6,965.77	170.20	30.35	77.24	1,287.42	334.99	7,421.00	7,296.33	124.67	59.525		
14,900.00	7,950.00	7,046.77	6,960.71	172.82	30.33	77.17	1,286.63	334.73	7,500.97	7,375.85	125.12	59.951		
15,000.00	7,950.00	7,041.64	6,955.65	175.44	30.30	77.11	1,285.84	334.46	7,581.41	7,455.86	125.55	60.385		
15,100.00	7,950.00	7,036.51	6,950.59	178.06	30.28	77.04	1,285.05	334.20	7,662.30	7,536.33	125.97	60.827		
15,200.00	7,950.00	7,031.39	6,945.53	180.68	30.26	76.98	1,284.26	333.94	7,743.64	7,617.27	126.37	61.276		
15,300.00	7,950.00	7,026.26	6,940.47	183.31	30.24	76.91	1,283.47	333.68	7,825.41	7,698.64	126.76	61.732		
15,400.00	7,950.00	7,021.14	6,935.42	185.93	30.21	76.85	1,282.68	333.42	7,907.59	7,780.45	127.14	62.195		
15,500.00	7,950.00	7,016.01	6,930.36	188.56	30.19	76.78	1,281.89	333.16	7,990.18	7,862.67	127.51	62.664		
15,600.00	7,950.00	7,010.88	6,925.30	191.19	30.17	76.72	1,281.10	332.89	8,073.15	7,945.29	127.86	63.139		
15,700.00	7,950.00	7,005.76	6,920.24	193.82	30.14	76.65	1,280.31	332.63	8,156.51	8,028.30	128.21	63.620		
15,800.00	7,950.00	7,000.63	6,915.18	196.46	30.12	76.59	1,279.52	332.37	8,240.23	8,111.69	128.54	64.107		
15,900.00	7,950.00	6,995.50	6,910.12	199.09	30.10	76.52	1,278.73	332.11	8,324.31	8,195.45	128.86	64.599		
16,000.00	7,950.00	7,009.62	6,905.07	201.73	30.16	76.46	1,277.94	331.85	8,408.73	8,279.48	129.25	65.058		
16,100.00	7,950.00	6,985.25	6,900.01	204.37	30.05	76.39	1,277.15	331.58	8,493.49	8,364.02	129.47	65.600		
16,200.00	7,950.00	6,980.12	6,894.95	207.01	30.03	76.32	1,276.36	331.32	8,578.58	8,448.81	129.77	66.108		
16,300.00	7,950.00	6,975.00	6,889.89	209.65	30.01	76.26	1,275.57	331.06	8,663.98	8,533.93	130.05	66.620		
16,400.00	7,950.00	6,969.87	6,884.83	212.29	29.99	76.19	1,274.78	330.80	8,749.68	8,619.36	130.32	67.138		
16,500.00	7,950.00	6,964.74	6,879.77	214.93	29.96	76.13	1,273.99	330.54	8,835.69	8,705.10	130.59	67.659		
16,600.00	7,950.00	6,959.62	6,874.72	217.58	29.94	76.06	1,273.20	330.28	8,921.98	8,791.13	130.85	68.185		
16,700.00	7,950.00	6,954.49	6,869.66	220.22	29.92	76.00	1,272.41	330.01	9,008.55	8,877.45	131.10	68.716		
16,800.00	7,950.00	6,949.37	6,864.60	222.87	29.89	75.93	1,271.62	329.75	9,095.40	8,964.06	131.34	69.250		
16,900.00	7,950.00	6,944.24	6,859.54	225.52	29.87	75.87	1,270.83	329.49	9,182.51	9,050.93	131.58	69.788		
17,000.00	7,950.00	6,939.11	6,854.48	228.16	29.85	75.80	1,270.04	329.23	9,269.88	9,138.07	131.81	70.330		
17,100.00	7,950.00	6,933.99	6,849.42	230.81	29.83	75.74	1,269.25	328.97	9,357.50	9,225.47	132.03	70.876		
17,200.00	7,950.00	6,928.86	6,844.37	233.46	29.80	75.67	1,268.46	328.70	9,445.36	9,313.11	132.24	71.425		
17,300.00	7,950.00	6,923.73	6,839.31	236.12	29.78	75.61	1,267.67	328.44	9,533.45	9,401.00	132.45	71.977		
17,400.00	7,950.00	6,918.61	6,834.25	238.77	29.76	75.54	1,266.88	328.18	9,621.78	9,489.13	132.65	72.533		
17,500.00	7,950.00	6,913.48	6,829.19	241.42	29.74	75.48	1,266.09	327.92	9,710.33	9,577.48	132.85	73.092		
17,600.00	7,950.00	6,908.35	6,824.13	244.08	29.71	75.41	1,265.30	327.66	9,799.10	9,666.06	133.04	73.655		
17,700.00	7,950.00	6,903.23	6,819.07	246.73	29.69	75.35	1,264.51	327.39	9,888.08	9,754.86	133.23	74.220		
17,800.00	7,950.00	6,901.90	6,814.01	249.39	29.68	75.28	1,263.72	327.13	9,977.27	9,843.85	133.42	74.779		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	4.40	4.40	0.00	0.01	-0.14	225.12	-0.56	225.12					
100.00	100.00	104.40	104.40	0.13	0.15	-0.14	225.12	-0.56	225.12	224.83	0.28	790.924		
200.00	200.00	204.40	204.40	0.49	0.51	-0.14	225.12	-0.56	225.12	224.12	1.00	224.765		
250.00	250.00	254.40	254.40	0.67	0.69	-0.14	225.12	-0.56	225.12	223.76	1.36	165.523 CC, ES		
300.00	300.00	301.40	301.40	0.84	0.86	-163.48	225.46	-0.25	225.90	224.20	1.70	132.850		
400.00	399.93	395.63	395.57	1.19	1.19	-163.14	227.86	1.92	231.79	229.41	2.39	97.183		
500.00	499.68	509.38	490.35	1.54	1.61	-162.53	232.52	6.14	243.38	240.22	3.16	77.078		
600.00	599.13	589.38	588.83	1.92	1.90	-162.03	238.03	11.13	258.96	255.15	3.81	67.958		
700.00	698.15	687.58	686.75	2.32	2.27	-161.78	243.50	16.08	277.82	273.28	4.54	61.249		
800.00	796.63	785.10	783.99	2.74	2.63	-161.74	248.94	21.00	299.92	294.66	5.26	56.970		
900.00	894.44	881.82	880.44	3.20	2.99	-161.86	254.33	25.88	325.25	319.25	6.00	54.240		
1,000.00	991.46	977.63	975.97	3.70	3.35	-162.10	259.67	30.72	353.79	347.06	6.73	52.566		
1,100.00	1,087.58	1,072.40	1,070.48	4.24	3.71	-162.43	264.96	35.50	385.51	378.04	7.47	51.631		
1,200.00	1,182.68	1,166.03	1,163.84	4.83	4.06	-162.80	270.17	40.22	420.41	412.20	8.20	51.243		
1,300.00	1,276.65	1,258.39	1,255.94	5.46	4.41	-163.19	275.32	44.88	458.45	449.51	8.94	51.269		
1,400.00	1,369.36	1,349.38	1,346.68	6.14	4.75	-163.60	280.40	49.48	499.61	489.93	9.68	51.614		
1,471.15	1,434.50	1,413.22	1,410.34	6.66	4.99	-163.88	283.95	52.70	530.78	520.57	10.21	52.009		
1,500.00	1,460.77	1,438.95	1,435.99	6.87	5.09	-164.07	285.39	54.00	543.73	533.31	10.42	52.188		
1,600.00	1,551.82	1,528.14	1,524.92	7.62	5.42	-164.67	290.36	58.50	588.67	577.52	11.14	52.822		
1,700.00	1,642.88	1,617.32	1,613.85	8.38	5.76	-165.18	295.33	63.00	633.64	621.77	11.87	53.364		
1,800.00	1,733.93	1,706.50	1,702.78	9.15	6.09	-165.62	300.30	67.50	678.66	666.05	12.61	53.832		
1,900.00	1,824.98	1,804.32	1,791.71	9.93	6.46	-166.00	305.27	72.00	723.70	710.32	13.37	54.110		
2,000.00	1,916.03	1,884.86	1,880.64	10.71	6.77	-166.35	310.25	76.50	768.76	754.68	14.08	54.598		
2,100.00	2,007.08	1,974.04	1,969.57	11.49	7.10	-166.65	315.22	81.00	813.85	799.03	14.82	54.914		
2,200.00	2,098.13	2,063.23	2,058.50	12.28	7.44	-166.92	320.19	85.50	858.95	843.38	15.56	55.195		
2,300.00	2,189.19	2,152.41	2,147.43	13.07	7.77	-167.17	325.16	90.00	904.06	887.76	16.30	55.447		
2,400.00	2,280.24	2,241.59	2,236.36	13.86	8.11	-167.39	330.13	94.50	949.19	932.14	17.05	55.673		
2,500.00	2,371.29	2,330.77	2,325.29	14.65	8.45	-167.59	335.10	99.00	994.32	976.53	17.79	55.878		
2,600.00	2,462.34	2,419.95	2,414.22	15.44	8.78	-167.78	340.07	103.50	1,039.47	1,020.93	18.54	56.063		
2,700.00	2,553.39	2,509.13	2,503.14	16.24	9.12	-167.94	345.05	108.00	1,084.62	1,065.33	19.29	56.233		
2,800.00	2,644.45	2,601.69	2,592.07	17.03	9.47	-168.10	350.02	112.50	1,129.78	1,109.73	20.05	56.352		
2,900.00	2,735.50	2,687.50	2,681.00	17.83	9.79	-168.24	354.99	117.00	1,174.95	1,154.16	20.78	56.529		
3,000.00	2,826.55	2,776.68	2,769.93	18.63	10.13	-168.38	359.96	121.50	1,220.12	1,198.59	21.53	56.659		
3,100.00	2,917.60	2,865.86	2,858.86	19.43	10.46	-168.50	364.93	126.00	1,265.30	1,243.01	22.28	56.780		
3,200.00	3,008.65	2,955.04	2,947.79	20.23	10.80	-168.61	369.90	130.50	1,310.48	1,287.44	23.03	56.891		
3,300.00	3,099.70	3,044.22	3,036.72	21.03	11.14	-168.72	374.87	135.00	1,355.66	1,331.88	23.79	56.995		
3,400.00	3,190.76	3,133.40	3,125.65	21.83	11.47	-168.82	379.85	139.50	1,400.85	1,376.32	24.54	57.091		
3,500.00	3,281.81	3,222.59	3,214.58	22.63	11.81	-168.92	384.82	144.00	1,446.04	1,420.76	25.29	57.180		
3,600.00	3,372.86	3,311.77	3,303.51	23.43	12.15	-169.00	389.79	148.50	1,491.24	1,465.20	26.04	57.264		
3,700.00	3,463.91	3,400.95	3,392.44	24.23	12.48	-169.09	394.76	153.00	1,536.44	1,509.64	26.79	57.342		
3,800.00	3,554.96	3,509.87	3,481.37	25.03	12.89	-169.17	399.73	157.50	1,581.64	1,554.02	27.62	57.262		
3,900.00	3,646.01	3,579.31	3,570.30	25.83	13.16	-169.24	404.70	162.00	1,626.84	1,598.54	28.30	57.483		
4,000.00	3,737.07	3,668.49	3,659.22	26.63	13.49	-169.31	409.67	166.50	1,672.04	1,642.99	29.05	57.548		
4,100.00	3,828.12	3,757.68	3,748.15	27.43	13.83	-169.38	414.65	171.00	1,717.25	1,687.44	29.81	57.609		
4,200.00	3,919.17	3,846.86	3,837.08	28.24	14.17	-169.44	419.62	175.50	1,762.46	1,731.89	30.56	57.666		
4,300.00	4,010.22	3,936.04	3,926.01	29.04	14.50	-169.50	424.59	180.00	1,807.66	1,776.35	31.32	57.720		
4,400.00	4,101.27	4,025.22	4,014.94	29.84	14.84	-169.56	429.56	184.50	1,852.88	1,820.80	32.07	57.771		
4,500.00	4,192.33	4,114.40	4,103.87	30.65	15.17	-169.61	434.53	189.00	1,898.09	1,865.26	32.83	57.819		
4,600.00	4,283.38	4,203.58	4,192.80	31.45	15.51	-169.66	439.50	193.50	1,943.30	1,909.72	33.58	57.864		
4,700.00	4,374.43	4,307.23	4,281.73	32.25	15.90	-169.71	444.47	198.00	1,988.52	1,954.12	34.39	57.817		
4,800.00	4,465.48	4,381.95	4,370.66	33.05	16.18	-169.76	449.44	202.50	2,033.73	1,998.64	35.10	57.948		
4,900.00	4,556.53	4,471.13	4,459.59	33.86	16.52	-169.80	454.42	207.00	2,078.95	2,043.10	35.85	57.987		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 1BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,000.00	4,647.58	4,560.31	4,548.52	34.66	16.86	-169.85	459.39	211.50	2,124.17	2,087.56	36.61	58.023			
5,100.00	4,738.64	4,649.49	4,637.45	35.47	17.19	-169.89	464.36	216.00	2,169.38	2,132.02	37.37	58.058			
5,200.00	4,829.69	4,738.67	4,726.37	36.27	17.53	-169.93	469.33	220.50	2,214.60	2,176.48	38.12	58.092			
5,300.00	4,920.74	4,827.86	4,815.30	37.07	17.87	-169.97	474.30	225.00	2,259.82	2,220.94	38.88	58.123			
5,400.00	5,011.79	4,917.04	4,904.23	37.88	18.20	-170.00	479.27	229.50	2,305.04	2,265.41	39.64	58.153			
5,500.00	5,102.84	5,006.22	4,993.16	38.68	18.54	-170.04	484.24	234.00	2,350.27	2,309.87	40.40	58.182			
5,600.00	5,193.89	5,104.60	5,082.09	39.48	18.91	-170.07	489.22	238.50	2,395.49	2,354.30	41.19	58.161			
5,700.00	5,284.95	5,184.58	5,171.02	40.29	19.21	-170.10	494.19	243.00	2,440.71	2,398.80	41.91	58.235			
5,800.00	5,376.00	5,273.76	5,259.95	41.09	19.55	-170.14	499.16	247.50	2,485.94	2,443.27	42.67	58.260			
5,900.00	5,467.05	5,362.95	5,348.88	41.90	19.89	-170.17	504.13	252.00	2,531.16	2,487.73	43.43	58.283			
6,000.00	5,558.10	5,452.13	5,437.81	42.70	20.22	-170.19	509.10	256.50	2,576.39	2,532.20	44.19	58.306			
6,100.00	5,649.15	5,541.31	5,526.74	43.51	20.56	-170.22	514.07	261.00	2,621.61	2,576.66	44.95	58.327			
6,200.00	5,740.21	5,630.49	5,615.67	44.31	20.89	-170.25	519.04	265.50	2,666.84	2,621.13	45.71	58.347			
6,300.00	5,831.26	5,719.67	5,704.60	45.11	21.23	-170.28	524.02	270.00	2,712.06	2,665.60	46.47	58.367			
6,400.00	5,922.31	5,808.85	5,793.52	45.92	21.57	-170.30	528.99	274.50	2,757.29	2,710.06	47.23	58.385			
6,500.00	6,013.36	5,901.96	5,882.45	46.72	21.92	-170.33	533.96	279.00	2,802.52	2,754.52	48.00	58.385			
6,600.00	6,104.41	5,987.22	5,971.38	47.53	22.24	-170.35	538.93	283.50	2,847.74	2,799.00	48.75	58.420			
6,700.00	6,195.46	6,076.40	6,060.31	48.33	22.58	-170.37	543.90	288.00	2,892.97	2,843.47	49.51	58.436			
6,800.00	6,286.52	6,165.58	6,149.24	49.14	22.91	-170.40	548.87	292.50	2,938.20	2,887.93	50.27	58.451			
6,900.00	6,377.57	6,254.76	6,238.17	49.94	23.25	-170.42	553.84	297.00	2,983.43	2,932.40	51.03	58.466			
7,000.00	6,468.62	6,343.94	6,327.10	50.75	23.59	-170.44	558.82	301.50	3,028.66	2,976.87	51.79	58.480			
7,100.00	6,559.67	6,433.13	6,416.03	51.55	23.92	-170.46	563.79	306.01	3,073.89	3,021.34	52.55	58.493			
7,200.00	6,650.72	6,522.31	6,504.96	52.36	24.26	-170.48	568.76	310.51	3,119.12	3,065.80	53.31	58.506			
7,300.00	6,741.77	6,611.49	6,593.89	53.16	24.60	-170.50	573.73	315.01	3,164.35	3,110.27	54.07	58.518			
7,400.00	6,832.83	6,700.67	6,682.82	53.97	24.93	-170.52	578.70	319.51	3,209.58	3,154.74	54.84	58.529			
7,500.00	6,923.88	6,789.85	6,771.75	54.77	25.27	-170.54	583.67	324.01	3,254.81	3,199.21	55.60	58.540			
7,600.00	7,014.93	6,879.03	6,860.67	55.58	25.61	-170.55	588.64	328.51	3,300.04	3,243.68	56.36	58.551			
7,700.00	7,105.98	6,968.22	6,949.60	56.38	25.94	-170.57	593.62	333.01	3,345.27	3,288.14	57.13	58.560			
7,800.00	7,197.03	7,057.40	7,038.53	57.19	26.28	-170.59	598.59	337.51	3,390.50	3,332.61	57.89	58.570			
7,900.00	7,288.09	7,146.58	7,127.46	57.99	26.62	-170.60	603.56	342.01	3,435.73	3,377.08	58.65	58.579			
7,982.08	7,362.82	7,219.78	7,200.45	58.65	26.89	-170.62	607.64	345.70	3,472.86	3,413.58	59.28	58.586			
8,000.00	7,379.16	7,235.77	7,216.40	58.79	26.95	-175.39	608.53	346.51	3,480.94	3,421.52	59.41	58.587			
8,050.00	7,424.95	7,280.43	7,260.93	59.18	27.12	170.88	611.02	348.76	3,503.15	3,443.36	59.79	58.591			
8,100.00	7,470.74	7,324.86	7,305.24	59.53	27.29	157.34	613.50	351.00	3,524.76	3,464.60	60.16	58.594			
8,150.00	7,516.17	7,368.74	7,348.99	59.84	27.45	144.88	615.94	353.22	3,545.62	3,485.11	60.51	58.598			
8,200.00	7,560.91	7,411.72	7,391.85	60.13	27.62	134.05	618.34	355.39	3,565.62	3,504.78	60.85	58.602			
8,250.00	7,604.61	7,455.27	7,435.62	60.38	28.63	127.06	630.37	408.19	3,583.93	3,521.16	62.76	57.101			
8,300.00	7,646.94	7,499.12	7,476.66	60.60	29.46	121.66	636.52	490.56	3,599.68	3,535.41	64.27	56.009			
8,350.00	7,687.58	7,536.61	7,513.62	60.78	29.82	116.27	638.34	529.78	3,614.51	3,549.57	64.93	55.665			
8,400.00	7,726.22	7,576.79	7,553.39	60.94	29.96	111.32	638.92	544.53	3,628.79	3,563.58	65.21	55.645			
8,450.00	7,762.57	7,613.81	7,589.40	61.07	29.98	106.91	639.00	546.77	3,642.56	3,577.25	65.30	55.780			
8,500.00	7,796.34	7,649.73	7,625.33	61.18	29.94	103.03	638.83	542.26	3,655.71	3,590.42	65.29	55.991			
8,550.00	7,827.28	7,683.36	7,658.59	61.26	29.86	99.63	638.51	533.94	3,668.15	3,602.92	65.23	56.234			
8,600.00	7,855.16	7,713.68	7,688.36	61.31	29.76	96.66	638.08	523.42	3,679.76	3,614.61	65.15	56.483			
8,650.00	7,879.76	7,738.85	7,713.30	61.35	29.66	94.09	637.56	511.69	3,690.42	3,625.35	65.07	56.712			
8,700.00	7,900.90	7,755.56	7,728.82	61.37	29.54	91.89	636.97	499.35	3,700.03	3,635.02	65.01	56.914			
8,750.00	7,918.42	7,773.26	7,747.17	61.37	29.43	90.02	636.32	486.80	3,708.48	3,643.50	64.98	57.073			
8,800.00	7,932.18	7,787.26	7,759.55	61.35	29.31	88.48	635.61	474.33	3,715.68	3,650.70	64.98	57.179			
8,850.00	7,942.07	7,797.77	7,769.11	61.31	29.19	87.25	634.85	462.13	3,721.55	3,656.53	65.03	57.231			
8,900.00	7,948.03	7,799.94	7,770.30	61.26	29.08	86.33	634.05	450.33	3,726.03	3,660.91	65.12	57.218			
8,949.68	7,950.00	7,799.01	7,770.31	61.20	28.96	85.70	633.21	439.11	3,729.02	3,663.77	65.25	57.147			
9,000.00	7,950.00	7,690.95	7,658.03	61.14	28.86	85.44	632.37	428.97	3,731.58	3,666.13	65.44	57.020			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 1BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,100.00	7,950.00	7,657.36	7,628.32	61.03	28.69	84.98	630.91	413.37	3,738.31	3,672.31	65.99	56.646			
9,200.00	7,950.00	7,630.28	7,603.74	60.93	28.55	84.60	629.68	402.08	3,747.34	3,680.60	66.74	56.149			
9,300.00	7,950.00	7,600.00	7,575.66	60.85	28.41	84.17	628.25	390.85	3,758.77	3,691.20	67.56	55.634			
9,400.00	7,950.00	7,589.58	7,565.86	60.80	28.36	84.02	627.74	387.33	3,772.59	3,703.91	68.68	54.933			
9,500.00	7,950.00	7,573.97	7,551.08	60.77	28.29	83.79	626.97	382.39	3,788.86	3,719.05	69.82	54.268			
9,600.00	7,950.00	7,550.00	7,528.13	60.76	28.18	83.44	625.77	375.60	3,807.62	3,736.67	70.95	53.669			
9,700.00	7,950.00	7,550.00	7,528.13	60.79	28.18	83.44	625.77	375.60	3,828.73	3,756.39	72.34	52.924			
9,800.00	7,950.00	7,550.00	7,528.13	60.86	28.18	83.44	625.77	375.60	3,852.33	3,778.55	73.78	52.216			
9,900.00	7,950.00	7,530.33	7,509.09	60.99	28.10	83.15	624.76	370.75	3,878.22	3,803.16	75.06	51.666			
10,000.00	7,950.00	7,522.54	7,501.50	61.21	28.06	83.03	624.35	369.01	3,906.49	3,830.02	76.47	51.085			
10,100.00	7,950.00	7,515.60	7,494.73	61.56	28.03	82.93	623.99	367.55	3,937.06	3,859.17	77.89	50.547			
10,200.00	7,950.00	7,500.00	7,479.45	62.08	27.96	82.69	623.17	364.56	3,969.92	3,890.68	79.24	50.102			
10,300.00	7,950.00	7,500.00	7,479.45	62.87	27.96	82.69	623.17	364.56	4,004.91	3,924.21	80.70	49.625			
10,400.00	7,950.00	7,500.00	7,479.45	63.95	27.96	82.69	623.17	364.56	4,042.07	3,959.92	82.15	49.201			
10,500.00	7,950.00	7,500.00	7,479.45	65.35	27.96	82.69	623.17	364.56	4,081.34	3,997.76	83.58	48.830			
10,600.00	7,950.00	7,500.00	7,479.45	67.00	27.96	82.69	623.17	364.56	4,122.67	4,037.68	84.99	48.509			
10,700.00	7,950.00	7,500.00	7,479.45	68.85	27.96	82.69	623.17	364.56	4,165.98	4,079.62	86.36	48.238			
10,800.00	7,950.00	7,500.00	7,479.45	70.83	27.96	82.69	623.17	364.56	4,211.23	4,123.52	87.71	48.014			
10,900.00	7,950.00	7,479.13	7,458.88	72.91	27.88	82.38	622.05	361.22	4,258.11	4,169.24	88.87	47.912			
11,000.00	7,950.00	7,476.09	7,455.87	75.07	27.87	82.33	621.89	360.79	4,306.95	4,216.82	90.13	47.785			
11,100.00	7,950.00	7,473.26	7,453.07	77.28	27.86	82.29	621.73	360.41	4,357.53	4,266.18	91.36	47.699			
11,200.00	7,950.00	7,470.63	7,450.46	79.54	27.85	82.25	621.59	360.07	4,409.79	4,317.25	92.54	47.651 SF			
11,300.00	7,950.00	7,450.00	7,429.99	81.83	27.76	81.94	620.46	357.81	4,463.86	4,370.29	93.57	47.705			
11,400.00	7,950.00	7,450.00	7,429.99	84.16	27.76	81.94	620.46	357.81	4,519.27	4,424.56	94.71	47.719			
11,500.00	7,950.00	7,450.00	7,429.99	86.51	27.76	81.94	620.46	357.81	4,576.18	4,480.38	95.80	47.767			
11,600.00	7,950.00	7,450.00	7,429.99	88.89	27.76	81.94	620.46	357.81	4,634.56	4,537.70	96.86	47.848			
11,700.00	7,950.00	7,450.00	7,429.99	91.29	27.76	81.94	620.46	357.81	4,694.34	4,596.46	97.88	47.960			
11,800.00	7,950.00	7,450.00	7,429.99	93.71	27.76	81.94	620.46	357.81	4,755.47	4,656.61	98.86	48.101			
11,900.00	7,950.00	7,450.00	7,429.99	96.14	27.76	81.94	620.46	357.81	4,817.90	4,718.09	99.81	48.269			
12,000.00	7,950.00	7,450.00	7,429.99	98.59	27.76	81.94	620.46	357.81	4,881.58	4,780.86	100.73	48.464			
12,100.00	7,950.00	7,450.00	7,429.99	101.05	27.76	81.94	620.46	357.81	4,946.47	4,844.86	101.60	48.684			
12,200.00	7,950.00	7,450.00	7,429.99	103.52	27.76	81.94	620.46	357.81	5,012.51	4,910.06	102.45	48.927			
12,300.00	7,950.00	7,450.00	7,429.99	106.01	27.76	81.94	620.46	357.81	5,079.66	4,976.39	103.26	49.192			
12,400.00	7,950.00	7,450.00	7,429.99	108.50	27.76	81.94	620.46	357.81	5,147.87	5,043.83	104.04	49.478			
12,500.00	7,950.00	7,450.00	7,429.99	111.01	27.76	81.94	620.46	357.81	5,217.11	5,112.32	104.80	49.784			
12,600.00	7,950.00	7,450.00	7,429.99	113.52	27.76	81.94	620.46	357.81	5,287.34	5,181.82	105.52	50.109			
12,700.00	7,950.00	7,450.00	7,429.99	116.04	27.76	81.94	620.46	357.81	5,358.51	5,252.30	106.21	50.451			
12,800.00	7,950.00	7,450.00	7,429.99	118.57	27.76	81.94	620.46	357.81	5,430.59	5,323.71	106.88	50.811			
12,900.00	7,950.00	7,450.00	7,429.99	121.11	27.76	81.94	620.46	357.81	5,503.54	5,396.03	107.52	51.187			
13,000.00	7,950.00	7,450.00	7,429.99	123.65	27.76	81.94	620.46	357.81	5,577.34	5,469.20	108.13	51.578			
13,100.00	7,950.00	7,450.00	7,429.99	126.20	27.76	81.94	620.46	357.81	5,651.94	5,543.21	108.73	51.983			
13,200.00	7,950.00	7,450.00	7,429.99	128.75	27.76	81.94	620.46	357.81	5,727.31	5,618.01	109.29	52.402			
13,300.00	7,950.00	7,439.69	7,419.74	131.31	27.72	81.78	619.90	356.95	5,803.35	5,693.56	109.79	52.861			
13,400.00	7,950.00	7,438.86	7,418.91	133.88	27.72	81.77	619.85	356.89	5,880.16	5,769.86	110.31	53.308			
13,500.00	7,950.00	7,438.06	7,418.11	136.45	27.72	81.76	619.80	356.84	5,957.67	5,846.86	110.81	53.766			
13,600.00	7,950.00	7,437.28	7,417.34	139.02	27.71	81.74	619.76	356.78	6,035.83	5,924.55	111.29	54.236			
13,700.00	7,950.00	7,426.28	7,406.37	141.60	27.67	81.58	619.15	356.12	6,114.72	6,003.02	111.70	54.744			
13,800.00	7,950.00	7,426.28	7,406.37	144.19	27.67	81.58	619.15	356.12	6,194.12	6,081.97	112.15	55.232			
13,900.00	7,950.00	7,426.28	7,406.37	146.77	27.67	81.58	619.15	356.12	6,274.11	6,161.53	112.58	55.730			
14,000.00	7,950.00	7,426.28	7,406.37	149.36	27.67	81.58	619.15	356.12	6,354.67	6,241.67	113.00	56.238			
14,100.00	7,950.00	7,426.28	7,406.37	151.96	27.67	81.58	619.15	356.12	6,435.77	6,322.37	113.40	56.754			
14,200.00	7,950.00	7,426.28	7,406.37	154.56	27.67	81.58	619.15	356.12	6,517.40	6,403.61	113.78	57.279			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,300.00	7,950.00	7,426.28	7,406.37	157.16	27.67	81.58	619.15	356.12	6,599.53	6,485.38	114.16	57.811		
14,400.00	7,950.00	7,426.28	7,406.37	159.76	27.67	81.58	619.15	356.12	6,682.15	6,567.64	114.51	58.352		
14,500.00	7,950.00	7,426.28	7,406.37	162.37	27.67	81.58	619.15	356.12	6,765.24	6,650.38	114.86	58.900		
14,600.00	7,950.00	7,426.28	7,406.37	164.98	27.67	81.58	619.15	356.12	6,848.79	6,733.59	115.19	59.455		
14,700.00	7,950.00	7,426.28	7,406.37	167.59	27.67	81.58	619.15	356.12	6,932.76	6,817.25	115.51	60.017		
14,800.00	7,950.00	7,426.28	7,406.37	170.20	27.67	81.58	619.15	356.12	7,017.16	6,901.34	115.82	60.585		
14,900.00	7,950.00	7,426.28	7,406.37	172.82	27.67	81.58	619.15	356.12	7,101.96	6,985.84	116.12	61.159		
15,000.00	7,950.00	7,426.28	7,406.37	175.44	27.67	81.58	619.15	356.12	7,187.16	7,070.75	116.41	61.739		
15,100.00	7,950.00	7,426.28	7,406.37	178.06	27.67	81.58	619.15	356.12	7,272.73	7,156.04	116.69	62.325		
15,200.00	7,950.00	7,426.28	7,406.37	180.68	27.67	81.58	619.15	356.12	7,358.66	7,241.70	116.96	62.916		
15,300.00	7,950.00	7,426.28	7,406.37	183.31	27.67	81.58	619.15	356.12	7,444.95	7,327.73	117.22	63.513		
15,400.00	7,950.00	7,426.28	7,406.37	185.93	27.67	81.58	619.15	356.12	7,531.57	7,414.10	117.47	64.114		
15,500.00	7,950.00	7,426.28	7,406.37	188.56	27.67	81.58	619.15	356.12	7,618.53	7,500.81	117.71	64.720		
15,600.00	7,950.00	7,426.30	7,406.39	191.19	27.67	81.58	619.15	356.12	7,705.80	7,587.85	117.95	65.331		
15,700.00	7,950.00	7,421.25	7,401.35	193.82	27.65	81.50	618.87	355.87	7,793.37	7,675.22	118.15	65.960		
15,800.00	7,950.00	7,416.19	7,396.31	196.46	27.63	81.42	618.59	355.61	7,881.24	7,762.89	118.35	66.593		
15,900.00	7,950.00	7,411.14	7,391.27	199.09	27.61	81.35	618.31	355.36	7,969.39	7,850.85	118.54	67.230		
16,000.00	7,950.00	7,406.09	7,386.24	201.73	27.60	81.27	618.02	355.10	8,057.81	7,939.09	118.72	67.871		
16,100.00	7,950.00	7,401.03	7,381.20	204.37	27.58	81.19	617.74	354.85	8,146.50	8,027.60	118.90	68.516		
16,200.00	7,950.00	7,395.98	7,376.16	207.01	27.56	81.12	617.46	354.59	8,235.44	8,116.37	119.07	69.164		
16,300.00	7,950.00	7,390.93	7,371.12	209.65	27.54	81.04	617.18	354.34	8,324.63	8,205.39	119.24	69.817		
16,400.00	7,950.00	7,385.88	7,366.08	212.29	27.52	80.96	616.90	354.08	8,414.06	8,294.67	119.40	70.472		
16,500.00	7,950.00	7,380.82	7,361.04	214.93	27.50	80.88	616.62	353.83	8,503.73	8,384.17	119.55	71.131		
16,600.00	7,950.00	7,375.77	7,356.01	217.58	27.48	80.81	616.33	353.57	8,593.61	8,473.91	119.70	71.792		
16,700.00	7,950.00	7,370.72	7,350.97	220.22	27.46	80.73	616.05	353.32	8,683.72	8,563.88	119.85	72.457		
16,800.00	7,950.00	7,365.67	7,345.93	222.87	27.44	80.65	615.77	353.06	8,774.04	8,654.05	119.99	73.125		
16,900.00	7,950.00	7,360.61	7,340.89	225.52	27.42	80.58	615.49	352.81	8,864.56	8,744.44	120.12	73.795		
17,000.00	7,950.00	7,355.56	7,335.85	228.16	27.40	80.50	615.21	352.55	8,955.29	8,835.03	120.26	74.469		
17,100.00	7,950.00	7,350.51	7,330.81	230.81	27.39	80.42	614.93	352.30	9,046.20	8,925.82	120.38	75.145		
17,200.00	7,950.00	7,345.46	7,325.78	233.46	27.37	80.35	614.64	352.04	9,137.30	9,016.79	120.51	75.823		
17,300.00	7,950.00	7,340.40	7,320.74	236.12	27.35	80.27	614.36	351.79	9,228.59	9,107.96	120.63	76.504		
17,400.00	7,950.00	7,335.35	7,315.70	238.77	27.33	80.19	614.08	351.53	9,320.05	9,199.30	120.75	77.187		
17,500.00	7,950.00	7,330.30	7,310.66	241.42	27.31	80.12	613.80	351.28	9,411.68	9,290.82	120.86	77.872		
17,600.00	7,950.00	7,325.24	7,305.62	244.08	27.29	80.04	613.52	351.02	9,503.47	9,382.50	120.97	78.559		
17,700.00	7,950.00	7,320.19	7,300.58	246.73	27.27	79.97	613.24	350.77	9,595.43	9,474.35	121.08	79.249		
17,800.00	7,950.00	7,315.14	7,295.55	249.39	27.25	79.89	612.95	350.51	9,687.55	9,566.36	121.18	79.941		
17,900.00	7,950.00	7,310.09	7,290.51	252.04	27.23	79.81	612.67	350.26	9,779.81	9,658.53	121.29	80.634		
18,000.00	7,950.00	7,305.03	7,285.47	254.70	27.21	79.74	612.39	350.00	9,872.23	9,750.84	121.39	81.330		
18,100.00	7,950.00	7,300.02	7,280.43	257.36	27.19	79.66	612.11	349.75	9,964.79	9,843.30	121.48	82.027		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.20	-0.20	0.00	0.00	-0.09	175.21	-0.28	175.21					
100.00	100.00	100.20	99.80	0.13	0.14	-0.09	175.21	-0.28	175.21	174.94	0.27	649.954		
200.00	200.00	200.20	199.80	0.49	0.49	-0.09	175.21	-0.28	175.21	174.22	0.99	177.604		
250.00	250.00	249.80	249.80	0.67	0.67	-0.09	175.21	-0.28	175.21	173.87	1.34	130.407		
300.00	300.00	302.77	302.77	0.84	0.85	-163.46	174.76	-0.09	175.20	173.51	1.70	103.260		
400.00	399.93	408.73	408.64	1.19	1.22	-163.31	171.17	1.45	175.16	172.76	2.40	73.092		
500.00	499.68	514.67	514.29	1.54	1.60	-162.99	163.98	4.52	175.06	171.94	3.12	56.180		
600.00	599.13	620.58	619.55	1.92	2.00	-162.52	153.20	9.13	174.91	171.06	3.85	45.466		
605.69	604.78	626.60	625.52	1.94	2.02	-162.49	152.48	9.44	174.90	171.01	3.89	44.972 CC, ES		
700.00	698.15	720.72	718.83	2.32	2.40	-162.15	141.24	14.25	176.33	171.75	4.58	38.519		
800.00	796.63	820.60	817.87	2.74	2.80	-162.11	129.30	19.36	181.06	175.74	5.32	34.036		
900.00	894.44	920.26	916.69	3.20	3.21	-162.38	117.39	24.45	189.12	183.05	6.07	31.148		
1,000.00	991.46	1,019.59	1,015.17	3.70	3.62	-162.90	105.52	29.53	200.50	193.67	6.83	29.360		
1,100.00	1,087.58	1,118.45	1,113.20	4.24	4.03	-163.61	93.70	34.58	215.22	207.62	7.59	28.344		
1,200.00	1,182.68	1,216.74	1,210.65	4.83	4.44	-164.43	81.96	39.61	233.28	224.92	8.36	27.902		
1,300.00	1,276.65	1,314.32	1,307.40	5.46	4.85	-165.31	70.30	44.60	254.71	245.58	9.13	27.895 SF		
1,400.00	1,369.36	1,411.09	1,403.35	6.14	5.25	-166.21	58.73	49.54	279.50	269.60	9.90	28.222		
1,471.15	1,434.50	1,479.37	1,471.05	6.66	5.54	-166.83	50.57	53.03	299.18	288.72	10.46	28.615		
1,500.00	1,460.77	1,506.96	1,498.40	6.87	5.66	-167.11	47.27	54.44	307.51	296.83	10.68	28.795		
1,600.00	1,551.82	1,602.57	1,593.21	7.62	6.06	-167.97	35.85	59.33	336.41	324.96	11.45	29.388		
1,700.00	1,642.88	1,701.81	1,688.02	8.38	6.47	-168.70	24.42	64.22	365.37	353.14	12.23	29.870		
1,800.00	1,733.93	1,806.19	1,782.83	9.15	6.91	-169.32	12.99	69.11	394.38	381.34	13.04	30.244		
1,900.00	1,824.98	1,889.43	1,877.63	9.93	7.26	-169.86	1.57	74.00	423.43	409.66	13.77	30.747		
2,000.00	1,916.03	1,985.05	1,972.44	10.71	7.67	-170.32	-9.86	78.88	452.51	437.96	14.55	31.098		
2,100.00	2,007.08	2,080.67	2,067.25	11.49	8.07	-170.73	-21.29	83.77	481.61	466.27	15.33	31.410		
2,200.00	2,098.13	2,176.29	2,162.06	12.28	8.47	-171.10	-32.72	88.66	510.73	494.61	16.12	31.689		
2,300.00	2,189.19	2,271.90	2,256.86	13.07	8.88	-171.42	-44.14	93.55	539.86	522.96	16.90	31.942		
2,400.00	2,280.24	2,367.52	2,351.67	13.86	9.28	-171.71	-55.57	98.44	569.02	551.33	17.69	32.170		
2,500.00	2,371.29	2,463.14	2,446.48	14.65	9.69	-171.98	-67.00	103.32	598.18	579.70	18.48	32.377		
2,600.00	2,462.34	2,558.76	2,541.29	15.44	10.09	-172.21	-78.43	108.21	627.35	608.09	19.26	32.566		
2,700.00	2,553.39	2,654.38	2,636.09	16.24	10.49	-172.43	-89.85	113.10	656.54	636.48	20.05	32.739		
2,800.00	2,644.45	2,750.00	2,730.90	17.03	10.90	-172.63	-101.28	117.99	685.73	664.88	20.84	32.899		
2,900.00	2,735.50	2,845.62	2,825.71	17.83	11.30	-172.81	-112.71	122.88	714.93	693.29	21.63	33.045		
3,000.00	2,826.55	2,941.24	2,920.51	18.63	11.71	-172.98	-124.13	127.76	744.13	721.70	22.43	33.181		
3,100.00	2,917.60	3,036.85	3,015.32	19.43	12.11	-173.14	-135.56	132.65	773.34	750.12	23.22	33.307		
3,200.00	3,008.65	3,132.47	3,110.13	20.23	12.52	-173.28	-146.99	137.54	802.55	778.54	24.01	33.424		
3,300.00	3,099.70	3,228.09	3,204.94	21.03	12.92	-173.42	-158.42	142.43	831.77	806.97	24.80	33.533		
3,400.00	3,190.76	3,323.71	3,299.74	21.83	13.32	-173.54	-169.84	147.32	860.99	835.40	25.60	33.635		
3,500.00	3,281.81	3,419.33	3,394.55	22.63	13.73	-173.66	-181.27	152.20	890.22	863.83	26.39	33.730		
3,600.00	3,372.86	3,514.95	3,489.36	23.43	14.13	-173.77	-192.70	157.09	919.45	892.26	27.19	33.820		
3,700.00	3,463.91	3,610.57	3,584.17	24.23	14.54	-173.87	-204.12	161.98	948.68	920.70	27.98	33.904		
3,800.00	3,554.96	3,706.18	3,678.97	25.03	14.94	-173.97	-215.55	166.87	977.92	949.14	28.78	33.983		
3,900.00	3,646.01	3,801.80	3,773.78	25.83	15.35	-174.06	-226.98	171.76	1,007.15	977.58	29.57	34.057		
4,000.00	3,737.07	3,902.58	3,868.59	26.63	15.77	-174.14	-238.41	176.65	1,036.39	1,006.01	30.39	34.106		
4,100.00	3,828.12	4,006.96	3,963.40	27.43	16.22	-174.22	-249.83	181.53	1,065.63	1,034.42	31.22	34.137		
4,200.00	3,919.17	4,088.66	4,058.20	28.24	16.56	-174.30	-261.26	186.42	1,094.88	1,062.92	31.96	34.257		
4,300.00	4,010.22	4,184.28	4,153.01	29.04	16.97	-174.37	-272.69	191.31	1,124.12	1,091.36	32.76	34.316		
4,400.00	4,101.27	4,279.90	4,247.82	29.84	17.37	-174.44	-284.12	196.20	1,153.37	1,119.81	33.55	34.373		
4,500.00	4,192.33	4,375.51	4,342.63	30.65	17.78	-174.51	-295.54	201.09	1,182.62	1,148.27	34.35	34.427		
4,600.00	4,283.38	4,471.13	4,437.43	31.45	18.18	-174.57	-306.97	205.97	1,211.87	1,176.72	35.15	34.478		
4,700.00	4,374.43	4,566.75	4,532.24	32.25	18.58	-174.63	-318.40	210.86	1,241.12	1,205.17	35.95	34.527		
4,800.00	4,465.48	4,662.37	4,627.05	33.05	18.99	-174.69	-329.82	215.75	1,270.37	1,233.62	36.74	34.573		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 2BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,757.99	4,721.86	33.86	19.39	-174.74	-341.25	220.64	1,299.62	1,262.08	37.54	34.618			
5,000.00	4,647.58	4,853.61	4,816.66	34.66	19.80	-174.79	-352.68	225.53	1,328.88	1,290.53	38.34	34.660			
5,100.00	4,738.64	4,949.23	4,911.47	35.47	20.20	-174.84	-364.11	230.41	1,358.13	1,318.99	39.14	34.701			
5,200.00	4,829.69	5,044.84	5,006.28	36.27	20.61	-174.89	-375.53	235.30	1,387.39	1,347.45	39.94	34.739			
5,300.00	4,920.74	5,140.46	5,101.09	37.07	21.01	-174.94	-386.96	240.19	1,416.64	1,375.91	40.74	34.776			
5,400.00	5,011.79	5,236.08	5,195.89	37.88	21.42	-174.98	-398.39	245.08	1,445.90	1,404.36	41.53	34.812			
5,500.00	5,102.84	5,331.70	5,290.70	38.68	21.82	-175.02	-409.82	249.97	1,475.16	1,432.82	42.33	34.846			
5,600.00	5,193.89	5,427.32	5,385.51	39.48	22.23	-175.06	-421.24	254.85	1,504.42	1,461.28	43.13	34.879			
5,700.00	5,284.95	5,522.94	5,480.32	40.29	22.63	-175.10	-432.67	259.74	1,533.68	1,489.74	43.93	34.910			
5,800.00	5,376.00	5,618.56	5,575.12	41.09	23.04	-175.14	-444.10	264.63	1,562.94	1,518.20	44.73	34.941			
5,900.00	5,467.05	5,714.18	5,669.93	41.90	23.44	-175.17	-455.52	269.52	1,592.20	1,546.67	45.53	34.970			
6,000.00	5,558.10	5,809.79	5,764.74	42.70	23.85	-175.21	-466.95	274.41	1,621.46	1,575.13	46.33	34.998			
6,100.00	5,649.15	5,905.41	5,859.54	43.51	24.25	-175.24	-478.38	279.29	1,650.72	1,603.59	47.13	35.025			
6,200.00	5,740.21	6,001.03	5,954.35	44.31	24.66	-175.28	-489.81	284.18	1,679.98	1,632.05	47.93	35.051			
6,300.00	5,831.26	6,103.35	6,049.16	45.11	25.09	-175.31	-501.23	289.07	1,709.24	1,660.49	48.75	35.058			
6,400.00	5,922.31	6,207.73	6,143.97	45.92	25.53	-175.34	-512.66	293.96	1,738.51	1,688.92	49.59	35.059			
6,500.00	6,013.36	6,287.89	6,238.77	46.72	25.87	-175.37	-524.09	298.85	1,767.77	1,717.44	50.33	35.123			
6,600.00	6,104.41	6,383.51	6,333.58	47.53	26.28	-175.39	-535.51	303.73	1,797.03	1,745.90	51.13	35.146			
6,700.00	6,195.46	6,479.12	6,428.39	48.33	26.68	-175.42	-546.94	308.62	1,826.30	1,774.37	51.93	35.167			
6,800.00	6,286.52	6,574.74	6,523.20	49.14	27.09	-175.45	-558.37	313.51	1,855.56	1,802.83	52.73	35.188			
6,900.00	6,377.57	6,670.36	6,618.00	49.94	27.49	-175.47	-569.80	318.40	1,884.83	1,831.30	53.53	35.209			
7,000.00	6,468.62	6,765.98	6,712.81	50.75	27.90	-175.50	-581.22	323.29	1,914.09	1,859.76	54.33	35.228			
7,100.00	6,559.67	6,861.60	6,807.62	51.55	28.30	-175.52	-592.65	328.18	1,943.36	1,888.22	55.13	35.247			
7,200.00	6,650.72	6,957.22	6,902.43	52.36	28.71	-175.55	-604.08	333.06	1,972.63	1,916.69	55.94	35.266			
7,300.00	6,741.77	7,052.84	6,997.23	53.16	29.11	-175.57	-615.51	337.95	2,001.89	1,945.15	56.74	35.283			
7,400.00	6,832.83	7,148.45	7,092.04	53.97	29.52	-175.59	-626.93	342.84	2,031.16	1,973.62	57.54	35.301			
7,500.00	6,923.88	7,244.07	7,186.85	54.77	29.92	-175.61	-638.36	347.73	2,060.42	2,002.08	58.34	35.317			
7,600.00	7,014.93	7,339.69	7,281.66	55.58	30.33	-175.63	-649.79	352.62	2,089.69	2,030.55	59.14	35.333			
7,700.00	7,105.98	7,435.31	7,376.46	56.38	30.73	-175.65	-661.21	357.50	2,118.96	2,059.02	59.94	35.349			
7,800.00	7,197.03	7,531.12	7,471.27	57.19	31.14	-175.67	-672.64	362.39	2,148.23	2,088.39	60.74	35.365			
7,900.00	7,288.09	7,626.74	7,566.08	57.99	31.54	-175.69	-684.07	367.28	2,177.50	2,117.76	61.54	35.381			
7,982.08	7,362.82	7,702.36	7,641.90	58.65	31.95	-175.71	-695.50	372.17	2,206.77	2,147.03	62.34	35.397			
8,000.00	7,379.16	7,719.70	7,658.24	58.79	35.42	-168.93	-734.64	806.81	2,171.06	2,101.98	69.08	31.426			
8,050.00	7,424.95	7,839.03	7,811.18	59.18	35.65	179.54	-735.52	830.04	2,179.09	2,109.28	69.80	31.217			
8,100.00	7,470.74	7,949.53	7,942.92	59.53	35.75	167.58	-735.87	840.39	2,188.13	2,117.88	70.24	31.150			
8,150.00	7,516.17	8,059.37	7,943.20	59.84	35.77	156.19	-735.93	842.21	2,198.17	2,127.68	70.49	31.185			
8,200.00	7,560.91	8,169.29	7,942.56	60.13	35.73	145.98	-735.80	838.17	2,209.15	2,138.56	70.59	31.297			
8,250.00	7,604.61	8,279.00	7,941.18	60.38	35.65	137.14	-735.51	830.01	2,220.95	2,150.36	70.58	31.467			
8,300.00	7,646.94	8,388.71	7,939.09	60.60	35.54	129.57	-735.11	818.85	2,233.42	2,162.92	70.50	31.680			
8,350.00	7,687.58	8,498.42	7,936.29	60.78	35.40	123.09	-734.58	805.49	2,246.41	2,176.04	70.36	31.926			
8,400.00	7,726.22	8,608.13	7,932.75	60.94	35.26	117.50	-733.95	790.49	2,259.75	2,189.56	70.19	32.195			
8,450.00	7,762.57	8,717.84	7,928.43	61.07	35.11	112.63	-733.20	774.26	2,273.29	2,203.29	70.00	32.475			
8,500.00	7,796.34	8,827.55	7,923.32	61.18	34.95	108.35	-732.35	757.14	2,286.85	2,217.05	69.80	32.762			
8,550.00	7,827.28	8,937.26	7,917.39	61.26	34.79	104.57	-731.39	739.36	2,300.28	2,230.67	69.61	33.046			
8,600.00	7,855.16	9,046.97	7,910.63	61.31	34.62	101.23	-730.32	721.14	2,313.42	2,243.98	69.44	33.316			
8,650.00	7,879.76	9,156.68	7,903.04	61.35	34.46	98.27	-729.15	702.64	2,326.11	2,256.82	69.29	33.570			
8,700.00	7,900.90	9,266.39	7,894.61	61.37	34.30	95.66	-727.88	683.99	2,338.21	2,269.03	69.18	33.797			
8,750.00	7,918.42	9,376.10	7,885.35	61.37	34.14	93.39	-726.51	665.34	2,349.59	2,280.47	69.12	33.992			
8,800.00	7,932.18	9,485.81	7,878.66	61.35	34.04	91.54	-725.53	652.84	2,360.14	2,290.89	69.25	34.082			
8,850.00	7,942.07	9,595.52	7,864.38	61.31	33.84	89.77	-723.48	628.37	2,369.69	2,300.54	69.15	34.269			
8,900.00	7,948.03	9,705.23	7,852.73	61.26	33.69	88.41	-721.83	610.27	2,378.19	2,308.95	69.24	34.347			
8,949.68	7,950.00	9,814.94	7,840.34	61.20	33.55	87.35	-720.09	592.53	2,385.49	2,316.10	69.39	34.378			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 2BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,000.00	7,950.00	7,950.00	7,823.21	61.14	33.36	86.93	-717.73	570.14	2,392.62	2,323.16	69.46	34.448			
9,100.00	7,950.00	7,917.89	7,802.46	61.03	33.16	86.44	-714.90	545.81	2,408.82	2,338.66	70.16	34.334			
9,200.00	7,950.00	7,883.18	7,778.54	60.93	32.96	85.87	-711.68	520.86	2,427.92	2,357.01	70.91	34.240			
9,300.00	7,950.00	7,850.00	7,754.32	60.85	32.77	85.29	-708.46	498.43	2,450.03	2,378.26	71.77	34.138			
9,400.00	7,950.00	7,824.83	7,735.10	60.80	32.62	84.84	-705.94	482.37	2,475.20	2,402.36	72.84	33.982			
9,500.00	7,950.00	7,800.00	7,715.48	60.77	32.49	84.37	-703.37	467.38	2,503.47	2,429.52	73.95	33.853			
9,600.00	7,950.00	7,778.38	7,697.88	60.76	32.37	83.96	-701.09	455.04	2,534.84	2,459.69	75.15	33.732			
9,700.00	7,950.00	7,750.00	7,674.09	60.79	32.22	83.40	-698.03	439.87	2,569.31	2,493.07	76.24	33.700			
9,800.00	7,950.00	7,750.00	7,674.09	60.86	32.22	83.40	-698.03	439.87	2,606.75	2,528.98	77.77	33.520			
9,900.00	7,950.00	7,725.00	7,652.54	60.99	32.09	82.90	-695.27	427.50	2,647.07	2,568.17	78.90	33.551			
10,000.00	7,950.00	7,700.00	7,630.47	61.21	31.96	82.39	-692.47	416.09	2,690.34	2,610.34	80.00	33.628			
10,100.00	7,950.00	7,700.00	7,630.47	61.56	31.96	82.39	-692.47	416.09	2,736.23	2,654.81	81.42	33.607			
10,200.00	7,950.00	7,700.00	7,630.47	62.08	31.96	82.39	-692.47	416.09	2,784.96	2,702.18	82.78	33.644			
10,300.00	7,950.00	7,674.27	7,607.27	62.87	31.83	81.85	-689.54	405.38	2,835.94	2,752.18	83.76	33.859			
10,400.00	7,950.00	7,650.00	7,584.96	63.95	31.71	81.34	-686.74	396.24	2,889.61	2,804.89	84.71	34.110			
10,500.00	7,950.00	7,650.00	7,584.96	65.35	31.71	81.34	-686.74	396.24	2,945.32	2,859.41	85.91	34.284			
10,600.00	7,950.00	7,650.00	7,584.96	67.00	31.71	81.34	-686.74	396.24	3,003.32	2,916.28	87.04	34.506			
10,700.00	7,950.00	7,650.00	7,584.96	68.85	31.71	81.34	-686.74	396.24	3,063.50	2,975.39	88.10	34.771			
10,800.00	7,950.00	7,630.91	7,567.15	70.83	31.62	80.93	-684.51	389.73	3,125.44	3,036.52	88.92	35.149			
10,900.00	7,950.00	7,624.04	7,560.69	72.91	31.58	80.78	-683.71	387.53	3,189.35	3,099.54	89.81	35.514			
11,000.00	7,950.00	7,600.00	7,537.89	75.07	31.47	80.26	-680.88	380.47	3,255.24	3,164.76	90.48	35.978			
11,100.00	7,950.00	7,600.00	7,537.89	77.28	31.47	80.26	-680.88	380.47	3,322.42	3,231.09	91.33	36.379			
11,200.00	7,950.00	7,600.00	7,537.89	79.54	31.47	80.26	-680.88	380.47	3,391.22	3,299.10	92.13	36.811			
11,300.00	7,950.00	7,600.00	7,537.89	81.83	31.47	80.26	-680.88	380.47	3,461.55	3,368.67	92.87	37.271			
11,400.00	7,950.00	7,600.00	7,537.89	84.16	31.47	80.26	-680.88	380.47	3,533.30	3,439.73	93.57	37.759			
11,500.00	7,950.00	7,600.00	7,537.89	86.51	31.47	80.26	-680.88	380.47	3,606.40	3,512.17	94.23	38.272			
11,600.00	7,950.00	7,600.00	7,537.89	88.89	31.47	80.26	-680.88	380.47	3,680.76	3,585.92	94.84	38.809			
11,700.00	7,950.00	7,600.00	7,537.89	91.29	31.47	80.26	-680.88	380.47	3,756.32	3,660.90	95.42	39.367			
11,800.00	7,950.00	7,578.74	7,517.50	93.71	31.37	79.80	-678.36	375.02	3,832.63	3,736.81	95.81	40.001			
11,900.00	7,950.00	7,575.03	7,513.92	96.14	31.35	79.72	-677.92	374.15	3,910.21	3,813.91	96.30	40.605			
12,000.00	7,950.00	7,571.52	7,510.52	98.59	31.33	79.65	-677.50	373.35	3,988.77	3,892.02	96.75	41.226			
12,100.00	7,950.00	7,550.00	7,489.64	101.05	31.23	79.18	-674.93	368.88	4,068.53	3,971.46	97.07	41.914			
12,200.00	7,950.00	7,550.00	7,489.64	103.52	31.23	79.18	-674.93	368.88	4,148.80	4,051.31	97.49	42.555			
12,300.00	7,950.00	7,550.00	7,489.64	106.01	31.23	79.18	-674.93	368.88	4,229.91	4,132.02	97.89	43.210			
12,400.00	7,950.00	7,550.00	7,489.64	108.50	31.23	79.18	-674.93	368.88	4,311.81	4,213.55	98.27	43.879			
12,500.00	7,950.00	7,550.00	7,489.64	111.01	31.23	79.18	-674.93	368.88	4,394.46	4,295.85	98.62	44.561			
12,600.00	7,950.00	7,550.00	7,489.64	113.52	31.23	79.18	-674.93	368.88	4,477.82	4,378.88	98.95	45.254			
12,700.00	7,950.00	7,550.00	7,489.64	116.04	31.23	79.18	-674.93	368.88	4,561.85	4,462.59	99.26	45.959			
12,800.00	7,950.00	7,550.00	7,489.64	118.57	31.23	79.18	-674.93	368.88	4,646.51	4,546.96	99.55	46.675			
12,900.00	7,950.00	7,550.00	7,489.64	121.11	31.23	79.18	-674.93	368.88	4,731.77	4,631.95	99.83	47.401			
13,000.00	7,950.00	7,550.00	7,489.64	123.65	31.23	79.18	-674.93	368.88	4,817.60	4,717.52	100.08	48.135			
13,100.00	7,950.00	7,550.00	7,489.64	126.20	31.23	79.18	-674.93	368.88	4,903.97	4,803.64	100.33	48.879			
13,200.00	7,950.00	7,550.00	7,489.64	128.75	31.23	79.18	-674.93	368.88	4,990.84	4,890.28	100.56	49.631			
13,300.00	7,950.00	7,550.00	7,489.64	131.31	31.23	79.18	-674.93	368.88	5,078.19	4,977.42	100.78	50.391			
13,400.00	7,950.00	7,550.00	7,489.64	133.88	31.23	79.18	-674.93	368.88	5,166.01	5,065.03	100.98	51.157			
13,500.00	7,950.00	7,550.00	7,489.64	136.45	31.23	79.18	-674.93	368.88	5,254.26	5,153.08	101.18	51.931			
13,600.00	7,950.00	7,550.00	7,489.64	139.02	31.23	79.18	-674.93	368.88	5,342.92	5,241.56	101.36	52.712			
13,700.00	7,950.00	7,550.00	7,489.64	141.60	31.23	79.18	-674.93	368.88	5,431.98	5,330.45	101.54	53.498			
13,800.00	7,950.00	7,550.00	7,489.64	144.19	31.23	79.18	-674.93	368.88	5,521.41	5,419.71	101.70	54.290			
13,900.00	7,950.00	7,527.91	7,468.03	146.77	31.13	78.69	-672.29	365.12	5,610.78	5,508.99	101.78	55.126			
14,000.00	7,950.00	7,526.40	7,466.55	149.36	31.13	78.66	-672.11	364.90	5,700.84	5,598.92	101.93	55.931			
14,100.00	7,950.00	7,524.94	7,465.12	151.96	31.12	78.63	-671.94	364.68	5,791.23	5,689.17	102.07	56.740			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 2BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,200.00	7,950.00	7,523.53	7,463.73	154.56	31.11	78.60	-671.77	364.48	5,881.93	5,779.73	102.20	57.554			
14,300.00	7,950.00	7,522.17	7,462.40	157.16	31.11	78.57	-671.60	364.28	5,972.92	5,870.60	102.33	58.372			
14,400.00	7,950.00	7,500.00	7,440.55	159.76	31.01	78.08	-668.95	361.58	6,064.58	5,962.21	102.38	59.239			
14,500.00	7,950.00	7,500.00	7,440.55	162.37	31.01	78.08	-668.95	361.58	6,156.08	6,053.58	102.50	60.061			
14,600.00	7,950.00	7,500.00	7,440.55	164.98	31.01	78.08	-668.95	361.58	6,247.83	6,145.22	102.61	60.887			
14,700.00	7,950.00	7,500.00	7,440.55	167.59	31.01	78.08	-668.95	361.58	6,339.84	6,237.11	102.72	61.717			
14,800.00	7,950.00	7,500.00	7,440.55	170.20	31.01	78.08	-668.95	361.58	6,432.08	6,329.25	102.83	62.550			
14,900.00	7,950.00	7,500.00	7,440.55	172.82	31.01	78.08	-668.95	361.58	6,524.55	6,421.62	102.93	63.387			
15,000.00	7,950.00	7,500.00	7,440.55	175.44	31.01	78.08	-668.95	361.58	6,617.25	6,514.21	103.03	64.226			
15,100.00	7,950.00	7,500.00	7,440.55	178.06	31.01	78.08	-668.95	361.58	6,710.15	6,607.02	103.13	65.068			
15,200.00	7,950.00	7,500.00	7,440.55	180.68	31.01	78.08	-668.95	361.58	6,803.25	6,700.03	103.22	65.913			
15,300.00	7,950.00	7,500.00	7,440.55	183.31	31.01	78.08	-668.95	361.58	6,896.54	6,793.24	103.30	66.760			
15,400.00	7,950.00	7,500.00	7,440.55	185.93	31.01	78.08	-668.95	361.58	6,990.03	6,886.64	103.39	67.610			
15,500.00	7,950.00	7,500.00	7,440.55	188.56	31.01	78.08	-668.95	361.58	7,083.69	6,980.22	103.47	68.462			
15,600.00	7,950.00	7,500.00	7,440.55	191.19	31.01	78.08	-668.95	361.58	7,177.52	7,073.97	103.55	69.316			
15,700.00	7,950.00	7,500.00	7,440.55	193.82	31.01	78.08	-668.95	361.58	7,271.51	7,167.89	103.62	70.172			
15,800.00	7,950.00	7,500.00	7,440.55	196.46	31.01	78.08	-668.95	361.58	7,365.66	7,261.97	103.70	71.030			
15,900.00	7,950.00	7,500.00	7,440.55	199.09	31.01	78.08	-668.95	361.58	7,459.97	7,356.20	103.77	71.889			
16,000.00	7,950.00	7,500.00	7,440.55	201.73	31.01	78.08	-668.95	361.58	7,554.42	7,450.58	103.84	72.751			
16,100.00	7,950.00	7,500.00	7,440.55	204.37	31.01	78.08	-668.95	361.58	7,649.01	7,545.11	103.91	73.614			
16,200.00	7,950.00	7,500.00	7,440.55	207.01	31.01	78.08	-668.95	361.58	7,743.74	7,639.77	103.97	74.479			
16,300.00	7,950.00	7,500.00	7,440.55	209.65	31.01	78.08	-668.95	361.58	7,838.60	7,734.56	104.04	75.345			
16,400.00	7,950.00	7,500.00	7,440.55	212.29	31.01	78.08	-668.95	361.58	7,933.59	7,829.49	104.10	76.212			
16,500.00	7,950.00	7,500.00	7,440.55	214.93	31.01	78.08	-668.95	361.58	8,028.69	7,924.53	104.16	77.080			
16,600.00	7,950.00	7,500.00	7,440.55	217.58	31.01	78.08	-668.95	361.58	8,123.92	8,019.70	104.22	77.950			
16,700.00	7,950.00	7,500.00	7,440.55	220.22	31.01	78.08	-668.95	361.58	8,219.26	8,114.98	104.28	78.821			
16,800.00	7,950.00	7,500.00	7,440.55	222.87	31.01	78.08	-668.95	361.58	8,314.71	8,210.37	104.33	79.693			
16,900.00	7,950.00	7,500.00	7,440.55	225.52	31.01	78.08	-668.95	361.58	8,410.26	8,305.87	104.39	80.565			
17,000.00	7,950.00	7,500.00	7,440.55	228.16	31.01	78.08	-668.95	361.58	8,505.92	8,401.47	104.45	81.439			
17,100.00	7,950.00	7,500.00	7,440.55	230.81	31.01	78.08	-668.95	361.58	8,601.67	8,497.17	104.50	82.313			
17,200.00	7,950.00	7,500.00	7,440.55	233.46	31.01	78.08	-668.95	361.58	8,697.52	8,592.97	104.55	83.188			
17,300.00	7,950.00	7,500.00	7,440.55	236.12	31.01	78.08	-668.95	361.58	8,793.46	8,688.86	104.60	84.064			
17,400.00	7,950.00	7,500.00	7,440.55	238.77	31.01	78.08	-668.95	361.58	8,889.50	8,784.84	104.66	84.941			
17,500.00	7,950.00	7,500.00	7,440.55	241.42	31.01	78.08	-668.95	361.58	8,985.61	8,880.91	104.71	85.818			
17,600.00	7,950.00	7,500.00	7,440.55	244.08	31.01	78.08	-668.95	361.58	9,081.82	8,977.06	104.76	86.695			
17,700.00	7,950.00	7,500.00	7,440.55	246.73	31.01	78.08	-668.95	361.58	9,178.10	9,073.30	104.81	87.573			
17,800.00	7,950.00	7,500.00	7,440.55	249.39	31.01	78.08	-668.95	361.58	9,274.46	9,169.61	104.85	88.451			
17,900.00	7,950.00	7,500.00	7,440.55	252.04	31.01	78.08	-668.95	361.58	9,370.90	9,266.00	104.90	89.330			
18,000.00	7,950.00	7,500.00	7,440.55	254.70	31.01	78.08	-668.95	361.58	9,467.41	9,362.46	104.95	90.209			
18,100.00	7,950.00	7,500.00	7,440.55	257.36	31.01	78.08	-668.95	361.58	9,564.00	9,459.00	105.00	91.089			
18,200.00	7,950.00	7,500.00	7,440.55	260.02	31.01	78.08	-668.95	361.58	9,660.65	9,555.61	105.04	91.968			
18,300.00	7,950.00	7,500.00	7,440.55	262.67	31.01	78.08	-668.95	361.58	9,757.37	9,652.28	105.09	92.848			
18,400.00	7,950.00	7,500.00	7,440.55	265.33	31.01	78.08	-668.95	361.58	9,854.16	9,749.02	105.14	93.728			
18,500.00	7,950.00	7,500.00	7,440.55	267.99	31.01	78.08	-668.95	361.58	9,951.01	9,845.83	105.18	94.608			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 3AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.10	0.10	0.00	0.00	-0.13	125.31	-0.28	125.31						
100.00	100.00	100.10	100.10	0.13	0.13	-0.13	125.31	-0.28	125.31	125.04	0.27	465.463			
200.00	200.00	200.10	200.10	0.49	0.49	-0.13	125.31	-0.28	125.31	124.32	0.99	127.068			
250.00	250.00	250.10	250.10	0.67	0.67	-0.13	125.31	-0.28	125.31	123.96	1.34	93.192			
300.00	300.00	302.31	302.31	0.84	0.85	-163.52	124.85	-0.16	125.28	123.59	1.70	73.913			
400.00	399.93	406.73	406.65	1.19	1.21	-163.55	121.17	0.82	125.10	122.71	2.39	52.376			
500.00	499.68	511.13	510.77	1.54	1.58	-163.62	113.81	2.77	124.75	121.64	3.10	40.228			
600.00	599.13	615.52	614.53	1.92	1.98	-163.71	102.80	5.70	124.21	120.39	3.82	32.486			
700.00	698.15	719.88	717.78	2.32	2.40	-163.83	88.15	9.59	123.50	118.95	4.56	27.113			
800.00	796.63	824.22	820.38	2.74	2.85	-163.99	69.87	14.44	122.62	117.32	5.29	23.158			
838.50	834.37	863.12	858.48	2.92	3.03	-164.08	62.28	16.46	122.38	116.80	5.59	21.912	CC, ES		
900.00	894.44	924.61	918.70	3.20	3.31	-164.34	50.26	19.65	123.02	116.97	6.05	20.332			
1,000.00	991.46	1,024.52	1,016.54	3.70	3.78	-165.08	30.71	24.84	126.78	119.97	6.81	18.623			
1,100.00	1,087.58	1,124.23	1,114.18	4.24	4.26	-166.13	11.21	30.02	133.94	126.36	7.58	17.667			
1,200.00	1,182.68	1,223.61	1,211.51	4.83	4.74	-167.37	-8.22	35.19	144.54	136.18	8.36	17.294	SF		
1,300.00	1,276.65	1,322.55	1,308.40	5.46	5.22	-168.67	-27.58	40.33	158.59	149.45	9.14	17.354			
1,400.00	1,369.36	1,420.92	1,404.74	6.14	5.70	-169.95	-46.81	45.44	176.11	166.19	9.92	17.747			
1,471.15	1,434.50	1,509.50	1,472.88	6.66	6.13	-170.81	-60.42	49.05	190.69	180.13	10.56	18.060			
1,500.00	1,460.77	1,518.64	1,500.44	6.87	6.18	-171.15	-65.93	50.51	196.95	186.24	10.71	18.382			
1,600.00	1,551.82	1,616.17	1,595.95	7.62	6.66	-172.20	-85.00	55.58	218.72	207.22	11.50	19.016			
1,700.00	1,642.88	1,713.70	1,691.46	8.38	7.14	-173.06	-104.08	60.65	240.55	228.26	12.29	19.565			
1,800.00	1,733.93	1,811.23	1,786.98	9.15	7.62	-173.77	-123.15	65.72	262.42	249.33	13.09	20.044			
1,900.00	1,824.98	1,908.76	1,882.49	9.93	8.10	-174.38	-142.23	70.78	284.32	270.43	13.89	20.465			
2,000.00	1,916.03	2,006.30	1,978.00	10.71	8.59	-174.90	-161.30	75.85	306.25	291.56	14.70	20.838			
2,100.00	2,007.08	2,103.83	2,073.52	11.49	9.07	-175.35	-180.38	80.92	328.20	312.70	15.50	21.169			
2,200.00	2,098.13	2,201.36	2,169.03	12.28	9.55	-175.74	-199.45	85.98	350.17	333.86	16.31	21.466			
2,300.00	2,189.19	2,301.11	2,264.54	13.07	10.05	-176.08	-218.53	91.05	372.15	355.02	17.13	21.722			
2,400.00	2,280.24	2,403.58	2,360.06	13.86	10.56	-176.39	-237.61	96.12	394.14	376.18	17.96	21.941			
2,500.00	2,371.29	2,493.95	2,455.57	14.65	11.01	-176.67	-256.68	101.18	416.14	397.39	18.75	22.193			
2,600.00	2,462.34	2,608.52	2,551.08	15.44	11.58	-176.92	-275.76	106.25	438.15	418.52	19.63	22.318			
2,700.00	2,553.39	2,689.01	2,646.60	16.24	11.98	-177.14	-294.83	111.32	460.17	439.78	20.38	22.576			
2,800.00	2,644.45	2,786.55	2,742.11	17.03	12.46	-177.34	-313.91	116.38	482.19	460.99	21.20	22.744			
2,900.00	2,735.50	2,884.08	2,837.62	17.83	12.95	-177.53	-332.98	121.45	504.22	482.20	22.02	22.898			
3,000.00	2,826.55	2,981.61	2,933.14	18.63	13.44	-177.70	-352.06	126.52	526.25	503.41	22.84	23.041			
3,100.00	2,917.60	3,079.14	3,028.65	19.43	13.92	-177.86	-371.13	131.58	548.28	524.63	23.66	23.174			
3,200.00	3,008.65	3,176.67	3,124.16	20.23	14.41	-178.00	-390.21	136.65	570.32	545.84	24.48	23.297			
3,300.00	3,099.70	3,274.20	3,219.68	21.03	14.89	-178.13	-409.28	141.72	592.37	567.07	25.30	23.411			
3,400.00	3,190.76	3,371.73	3,315.19	21.83	15.38	-178.26	-428.36	146.79	614.41	588.29	26.12	23.518			
3,500.00	3,281.81	3,469.26	3,410.71	22.63	15.87	-178.37	-447.44	151.85	636.46	609.52	26.95	23.619			
3,600.00	3,372.86	3,566.80	3,506.22	23.43	16.35	-178.48	-466.51	156.92	658.51	630.74	27.77	23.712			
3,700.00	3,463.91	3,664.33	3,601.73	24.23	16.84	-178.58	-485.59	161.99	680.57	651.97	28.59	23.801			
3,800.00	3,554.96	3,761.86	3,697.25	25.03	17.33	-178.68	-504.66	167.05	702.62	673.20	29.42	23.884			
3,900.00	3,646.01	3,859.39	3,792.76	25.83	17.81	-178.76	-523.74	172.12	724.68	694.43	30.24	23.962			
4,000.00	3,737.07	3,956.92	3,888.27	26.63	18.30	-178.85	-542.81	177.19	746.74	715.67	31.07	24.036			
4,100.00	3,828.12	4,054.45	3,983.79	27.43	18.79	-178.93	-561.89	182.25	768.80	736.90	31.89	24.106			
4,200.00	3,919.17	4,151.98	4,079.30	28.24	19.28	-179.00	-580.96	187.32	790.86	758.14	32.72	24.172			
4,300.00	4,010.22	4,249.51	4,174.81	29.04	19.76	-179.07	-600.04	192.39	812.92	779.37	33.54	24.234			
4,400.00	4,101.27	4,347.05	4,270.33	29.84	20.25	-179.14	-619.11	197.45	834.98	800.61	34.37	24.294			
4,500.00	4,192.33	4,444.58	4,365.84	30.65	20.74	-179.20	-638.19	202.52	857.05	821.85	35.20	24.350			
4,600.00	4,283.38	4,542.11	4,461.35	31.45	21.22	-179.26	-657.26	207.59	879.11	843.09	36.02	24.404			
4,700.00	4,374.43	4,639.64	4,556.87	32.25	21.71	-179.32	-676.34	212.65	901.18	864.33	36.85	24.456			
4,800.00	4,465.48	4,737.17	4,652.38	33.05	22.20	-179.37	-695.42	217.72	923.24	885.57	37.68	24.505			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 3AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,834.70	4,747.89	33.86	22.69	-179.42	-714.49	222.79	945.31	906.81	38.50	24.551			
5,000.00	4,647.58	4,932.23	4,843.41	34.66	23.17	-179.47	-733.57	227.85	967.38	928.05	39.33	24.596			
5,100.00	4,738.64	5,029.76	4,938.92	35.47	23.66	-179.52	-752.64	232.92	989.45	949.29	40.16	24.639			
5,200.00	4,829.69	5,127.30	5,034.43	36.27	24.15	-179.57	-771.72	237.99	1,011.52	970.53	40.99	24.680			
5,300.00	4,920.74	5,224.83	5,129.95	37.07	24.64	-179.61	-790.79	243.06	1,033.59	991.77	41.81	24.719			
5,400.00	5,011.79	5,322.36	5,225.46	37.88	25.12	-179.65	-809.87	248.12	1,055.66	1,013.02	42.64	24.757			
5,500.00	5,102.84	5,419.89	5,320.97	38.68	25.61	-179.69	-828.94	253.19	1,077.73	1,034.26	43.47	24.793			
5,600.00	5,193.89	5,517.42	5,416.49	39.48	26.10	-179.73	-848.02	258.26	1,099.80	1,055.50	44.30	24.828			
5,700.00	5,284.95	5,614.95	5,512.00	40.29	26.59	-179.76	-867.09	263.32	1,121.87	1,076.75	45.13	24.861			
5,800.00	5,376.00	5,712.48	5,607.51	41.09	27.07	-179.80	-886.17	268.39	1,143.94	1,097.99	45.95	24.893			
5,900.00	5,467.05	5,810.02	5,703.03	41.90	27.56	-179.83	-905.25	273.46	1,166.02	1,119.23	46.78	24.924			
6,000.00	5,558.10	5,907.55	5,798.54	42.70	28.05	-179.87	-924.32	278.52	1,188.09	1,140.48	47.61	24.954			
6,100.00	5,649.15	6,005.08	5,894.05	43.51	28.54	-179.90	-943.40	283.59	1,210.16	1,161.72	48.44	24.982			
6,200.00	5,740.21	6,102.61	5,989.57	44.31	29.02	-179.93	-962.47	288.66	1,232.24	1,182.97	49.27	25.010			
6,300.00	5,831.26	6,200.14	6,085.08	45.11	29.51	-179.96	-981.55	293.72	1,254.31	1,204.21	50.10	25.037			
6,400.00	5,922.31	6,302.33	6,180.59	45.92	30.02	-179.99	-1,000.62	298.79	1,276.39	1,225.44	50.95	25.054			
6,500.00	6,013.36	6,404.80	6,276.11	46.72	30.53	179.99	-1,019.70	303.86	1,298.46	1,246.67	51.79	25.070			
6,600.00	6,104.41	6,507.27	6,371.62	47.53	31.05	179.96	-1,038.77	308.92	1,320.54	1,267.89	52.64	25.085			
6,700.00	6,195.46	6,609.74	6,467.13	48.33	31.56	179.94	-1,057.85	313.99	1,342.61	1,289.12	53.49	25.100			
6,800.00	6,286.52	6,687.80	6,562.65	49.14	31.95	179.91	-1,076.92	319.06	1,364.69	1,310.44	54.25	25.158			
6,900.00	6,377.57	6,785.33	6,658.16	49.94	32.44	179.89	-1,096.00	324.12	1,386.76	1,331.69	55.08	25.179			
7,000.00	6,468.62	6,882.86	6,753.67	50.75	32.92	179.86	-1,115.07	329.19	1,408.84	1,352.93	55.91	25.200			
7,100.00	6,559.67	6,980.39	6,849.19	51.55	33.41	179.84	-1,134.15	334.26	1,430.91	1,374.18	56.74	25.221			
7,200.00	6,650.72	7,077.92	6,944.70	52.36	33.90	179.82	-1,153.23	339.33	1,452.99	1,395.43	57.57	25.241			
7,300.00	6,741.77	7,175.45	7,040.21	53.16	34.39	179.80	-1,172.30	344.39	1,475.07	1,416.67	58.40	25.260			
7,400.00	6,832.83	7,272.98	7,135.73	53.97	34.88	179.78	-1,191.38	349.46	1,497.14	1,437.92	59.23	25.279			
7,500.00	6,923.88	7,370.52	7,231.24	54.77	35.36	179.76	-1,210.45	354.53	1,519.22	1,459.17	60.06	25.297			
7,600.00	7,014.93	7,468.05	7,326.75	55.58	35.85	179.74	-1,229.53	359.59	1,541.30	1,480.41	60.89	25.314			
7,700.00	7,105.98	7,565.58	7,422.26	56.38	36.34	179.72	-1,248.61	364.66	1,563.38	1,501.65	61.72	25.331			
7,800.00	7,197.03	7,663.11	7,517.77	57.19	36.83	179.70	-1,267.70	369.73	1,585.46	1,522.89	62.55	25.348			
7,900.00	7,288.09	7,760.64	7,613.28	57.99	37.32	179.68	-1,286.78	374.80	1,607.54	1,544.13	63.38	25.365			
7,982.08	7,362.82	8,241.46	7,864.17	58.65	40.53	-165.08	-1,341.78	819.46	1,566.19	1,495.96	70.23	22.301			
8,000.00	7,379.16	8,249.35	7,865.63	58.79	40.60	-168.85	-1,342.16	827.21	1,567.82	1,497.29	70.53	22.229			
8,050.00	7,424.95	8,264.27	7,868.11	59.18	40.71	179.81	-1,342.82	841.91	1,573.31	1,502.12	71.20	22.099			
8,100.00	7,470.74	8,271.06	7,869.11	59.53	40.77	168.03	-1,343.10	848.62	1,580.31	1,508.67	71.64	22.060			
8,150.00	7,516.17	8,271.88	7,869.22	59.84	40.78	156.78	-1,343.13	849.43	1,588.79	1,516.89	71.90	22.098			
8,200.00	7,560.91	8,268.25	7,868.70	60.13	40.75	146.67	-1,342.99	845.83	1,598.68	1,526.66	72.02	22.198			
8,250.00	7,604.61	8,261.21	7,867.63	60.38	40.69	137.85	-1,342.69	838.88	1,609.85	1,537.82	72.03	22.349			
8,300.00	7,646.94	8,251.52	7,866.02	60.60	40.61	130.26	-1,342.26	829.34	1,622.15	1,550.19	71.96	22.541			
8,350.00	7,687.58	8,239.76	7,863.85	60.78	40.52	123.69	-1,341.70	817.80	1,635.39	1,563.55	71.84	22.764			
8,400.00	7,726.22	8,226.33	7,861.09	60.94	40.42	117.95	-1,341.00	804.68	1,649.39	1,577.71	71.68	23.009			
8,450.00	7,762.57	8,211.56	7,857.70	61.07	40.30	112.88	-1,340.16	790.32	1,663.95	1,592.45	71.50	23.271			
8,500.00	7,796.34	8,200.00	7,854.80	61.18	40.22	108.50	-1,339.46	779.15	1,678.88	1,607.43	71.45	23.499			
8,550.00	7,827.28	8,178.90	7,848.93	61.26	40.06	104.32	-1,338.06	758.93	1,693.95	1,622.80	71.16	23.806			
8,600.00	7,855.16	8,161.36	7,843.50	61.31	39.93	100.69	-1,336.79	742.30	1,709.01	1,638.00	71.02	24.065			
8,650.00	7,879.76	8,150.00	7,839.72	61.35	39.85	97.60	-1,335.91	731.63	1,723.88	1,652.76	71.12	24.240			
8,700.00	7,900.90	8,124.48	7,830.47	61.37	39.67	94.50	-1,333.80	707.94	1,738.32	1,667.44	70.87	24.528			
8,750.00	7,918.42	8,100.00	7,820.64	61.37	39.50	91.79	-1,331.59	685.63	1,752.24	1,681.52	70.72	24.777			
8,800.00	7,932.18	8,085.79	7,814.50	61.35	39.40	89.63	-1,330.22	672.89	1,765.42	1,694.47	70.96	24.880			
8,850.00	7,942.07	8,065.94	7,805.41	61.31	39.27	87.66	-1,328.21	655.35	1,777.77	1,706.67	71.10	25.003			
8,900.00	7,948.03	8,050.00	7,797.69	61.26	39.16	86.07	-1,326.51	641.52	1,789.16	1,717.72	71.43	25.048			
8,949.68	7,950.00	8,025.60	7,785.14	61.20	39.01	84.64	-1,323.78	620.77	1,799.35	1,727.77	71.58	25.137			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,000.00	7,950.00	8,000.00	7,771.06	61.14	38.84	84.19	-1,320.73	599.62	1,809.56	1,737.81	71.75	25.220			
9,100.00	7,950.00	7,968.32	7,752.36	61.03	38.65	83.61	-1,316.72	574.36	1,832.46	1,759.73	72.73	25.196			
9,200.00	7,950.00	7,934.64	7,731.02	60.93	38.44	82.94	-1,312.18	548.72	1,858.98	1,785.27	73.71	25.220			
9,300.00	7,950.00	7,900.00	7,707.56	60.85	38.23	82.22	-1,307.22	523.72	1,889.18	1,814.47	74.71	25.286			
9,400.00	7,950.00	7,876.68	7,690.95	60.80	38.09	81.71	-1,303.73	507.73	1,923.02	1,846.97	76.05	25.287			
9,500.00	7,950.00	7,850.00	7,671.18	60.77	37.94	81.10	-1,299.60	490.31	1,960.50	1,883.22	77.29	25.367			
9,600.00	7,950.00	7,829.29	7,655.30	60.76	37.82	80.62	-1,296.29	477.44	2,001.52	1,922.86	78.66	25.447			
9,700.00	7,950.00	7,800.00	7,632.07	60.79	37.65	79.93	-1,291.47	460.25	2,046.03	1,966.25	79.78	25.646			
9,800.00	7,950.00	7,800.00	7,632.07	60.86	37.65	79.93	-1,291.47	460.25	2,093.79	2,012.27	81.52	25.685			
9,900.00	7,950.00	7,773.43	7,610.29	60.99	37.50	79.28	-1,286.96	445.73	2,144.61	2,062.01	82.60	25.964			
10,000.00	7,950.00	7,750.00	7,590.54	61.21	37.36	78.70	-1,282.90	433.80	2,198.54	2,114.86	83.69	26.271			
10,100.00	7,950.00	7,750.00	7,590.54	61.56	37.36	78.70	-1,282.90	433.80	2,255.22	2,170.06	85.16	26.483			
10,200.00	7,950.00	7,730.91	7,574.11	62.08	37.26	78.21	-1,279.52	424.69	2,314.54	2,228.36	86.18	26.856			
10,300.00	7,950.00	7,718.98	7,563.69	62.87	37.19	77.91	-1,277.39	419.28	2,376.38	2,289.12	87.26	27.234			
10,400.00	7,950.00	7,700.00	7,546.90	63.95	37.08	77.43	-1,273.95	411.13	2,440.59	2,352.45	88.14	27.690			
10,500.00	7,950.00	7,700.00	7,546.90	65.35	37.08	77.43	-1,273.95	411.13	2,506.86	2,417.61	89.25	28.089			
10,600.00	7,950.00	7,700.00	7,546.90	67.00	37.08	77.43	-1,273.95	411.13	2,575.32	2,485.05	90.27	28.530			
10,700.00	7,950.00	7,679.61	7,528.57	68.85	36.97	76.90	-1,270.21	403.02	2,645.43	2,554.50	90.92	29.095			
10,800.00	7,950.00	7,671.45	7,521.16	70.83	36.93	76.69	-1,268.70	399.97	2,717.40	2,625.71	91.69	29.637			
10,900.00	7,950.00	7,650.00	7,501.47	72.91	36.81	76.13	-1,264.69	392.44	2,791.16	2,698.94	92.22	30.265			
11,000.00	7,950.00	7,650.00	7,501.47	75.07	36.81	76.13	-1,264.69	392.44	2,866.14	2,773.16	92.97	30.827			
11,100.00	7,950.00	7,650.00	7,501.47	77.28	36.81	76.13	-1,264.69	392.44	2,942.60	2,848.94	93.66	31.417			
11,200.00	7,950.00	7,650.00	7,501.47	79.54	36.81	76.13	-1,264.69	392.44	3,020.44	2,926.15	94.29	32.033			
11,300.00	7,950.00	7,650.00	7,501.47	81.83	36.81	76.13	-1,264.69	392.44	3,099.55	3,004.68	94.87	32.672			
11,400.00	7,950.00	7,650.00	7,501.47	84.16	36.81	76.13	-1,264.69	392.44	3,179.84	3,084.44	95.40	33.332			
11,500.00	7,950.00	7,627.20	7,480.27	86.51	36.68	75.53	-1,260.39	385.28	3,260.76	3,165.08	95.68	34.081			
11,600.00	7,950.00	7,622.28	7,475.65	88.89	36.66	75.41	-1,259.45	383.84	3,342.92	3,246.83	96.09	34.790			
11,700.00	7,950.00	7,600.00	7,454.62	91.29	36.54	74.82	-1,255.19	377.86	3,426.27	3,329.96	96.32	35.573			
11,800.00	7,950.00	7,600.00	7,454.62	93.71	36.54	74.82	-1,255.19	377.86	3,510.07	3,413.36	96.71	36.294			
11,900.00	7,950.00	7,600.00	7,454.62	96.14	36.54	74.82	-1,255.19	377.86	3,594.70	3,497.62	97.08	37.029			
12,000.00	7,950.00	7,600.00	7,454.62	98.59	36.54	74.82	-1,255.19	377.86	3,680.10	3,582.68	97.42	37.777			
12,100.00	7,950.00	7,600.00	7,454.62	101.05	36.54	74.82	-1,255.19	377.86	3,766.21	3,668.48	97.73	38.538			
12,200.00	7,950.00	7,600.00	7,454.62	103.52	36.54	74.82	-1,255.19	377.86	3,853.00	3,754.98	98.02	39.310			
12,300.00	7,950.00	7,600.00	7,454.62	106.01	36.54	74.82	-1,255.19	377.86	3,940.41	3,842.13	98.28	40.093			
12,400.00	7,950.00	7,600.00	7,454.62	108.50	36.54	74.82	-1,255.19	377.86	4,028.41	3,929.88	98.53	40.886			
12,500.00	7,950.00	7,600.00	7,454.62	111.01	36.54	74.82	-1,255.19	377.86	4,116.96	4,018.20	98.76	41.687			
12,600.00	7,950.00	7,600.00	7,454.62	113.52	36.54	74.82	-1,255.19	377.86	4,206.02	4,107.05	98.97	42.498			
12,700.00	7,950.00	7,600.00	7,454.62	116.04	36.54	74.82	-1,255.19	377.86	4,295.56	4,196.39	99.17	43.316			
12,800.00	7,950.00	7,600.00	7,454.62	118.57	36.54	74.82	-1,255.19	377.86	4,385.56	4,286.20	99.35	44.141			
12,900.00	7,950.00	7,576.70	7,432.39	121.11	36.41	74.21	-1,250.71	372.50	4,475.48	4,376.08	99.40	45.025			
13,000.00	7,950.00	7,574.19	7,429.99	123.65	36.40	74.15	-1,250.22	371.98	4,566.19	4,466.63	99.55	45.868			
13,100.00	7,950.00	7,571.79	7,427.68	126.20	36.39	74.08	-1,249.76	371.49	4,657.26	4,557.57	99.69	46.716			
13,200.00	7,950.00	7,550.00	7,406.68	128.75	36.27	73.51	-1,245.53	367.50	4,749.03	4,649.30	99.73	47.620			
13,300.00	7,950.00	7,550.00	7,406.68	131.31	36.27	73.51	-1,245.53	367.50	4,840.71	4,740.84	99.87	48.472			
13,400.00	7,950.00	7,550.00	7,406.68	133.88	36.27	73.51	-1,245.53	367.50	4,932.71	4,832.72	100.00	49.328			
13,500.00	7,950.00	7,550.00	7,406.68	136.45	36.27	73.51	-1,245.53	367.50	5,025.02	4,924.90	100.12	50.189			
13,600.00	7,950.00	7,550.00	7,406.68	139.02	36.27	73.51	-1,245.53	367.50	5,117.62	5,017.38	100.24	51.055			
13,700.00	7,950.00	7,550.00	7,406.68	141.60	36.27	73.51	-1,245.53	367.50	5,210.49	5,110.14	100.35	51.924			
13,800.00	7,950.00	7,550.00	7,406.68	144.19	36.27	73.51	-1,245.53	367.50	5,303.62	5,203.17	100.45	52.798			
13,900.00	7,950.00	7,550.00	7,406.68	146.77	36.27	73.51	-1,245.53	367.50	5,397.00	5,296.45	100.55	53.675			
14,000.00	7,950.00	7,550.00	7,406.68	149.36	36.27	73.51	-1,245.53	367.50	5,490.61	5,389.96	100.64	54.555			
14,100.00	7,950.00	7,550.00	7,406.68	151.96	36.27	73.51	-1,245.53	367.50	5,584.44	5,483.71	100.73	55.439			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 3AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,200.00	7,950.00	7,550.00	7,406.68	154.56	36.27	73.51	-1,245.53	367.50	5,678.48	5,577.66	100.82	56.325			
14,300.00	7,950.00	7,550.00	7,406.68	157.16	36.27	73.51	-1,245.53	367.50	5,772.72	5,671.83	100.90	57.215			
14,400.00	7,950.00	7,550.00	7,406.68	159.76	36.27	73.51	-1,245.53	367.50	5,867.15	5,766.18	100.97	58.107			
14,500.00	7,950.00	7,550.00	7,406.68	162.37	36.27	73.51	-1,245.53	367.50	5,961.77	5,860.72	101.05	59.001			
14,600.00	7,950.00	7,550.00	7,406.68	164.98	36.27	73.51	-1,245.53	367.50	6,056.55	5,955.44	101.12	59.897			
14,700.00	7,950.00	7,550.00	7,406.68	167.59	36.27	73.51	-1,245.53	367.50	6,151.51	6,050.32	101.18	60.796			
14,800.00	7,950.00	7,550.00	7,406.68	170.20	36.27	73.51	-1,245.53	367.50	6,246.62	6,145.37	101.25	61.697			
14,900.00	7,950.00	7,550.00	7,406.68	172.82	36.27	73.51	-1,245.53	367.50	6,341.88	6,240.57	101.31	62.599			
15,000.00	7,950.00	7,550.00	7,406.68	175.44	36.27	73.51	-1,245.53	367.50	6,437.28	6,335.91	101.37	63.503			
15,100.00	7,950.00	7,550.00	7,406.68	178.06	36.27	73.51	-1,245.53	367.50	6,532.82	6,431.39	101.43	64.409			
15,200.00	7,950.00	7,550.00	7,406.68	180.68	36.27	73.51	-1,245.53	367.50	6,628.49	6,527.01	101.48	65.316			
15,300.00	7,950.00	7,550.00	7,406.68	183.31	36.27	73.51	-1,245.53	367.50	6,724.29	6,622.76	101.54	66.225			
15,400.00	7,950.00	7,550.00	7,406.68	185.93	36.27	73.51	-1,245.53	367.50	6,820.21	6,718.62	101.59	67.134			
15,500.00	7,950.00	7,550.00	7,406.68	188.56	36.27	73.51	-1,245.53	367.50	6,916.25	6,814.61	101.64	68.045			
15,600.00	7,950.00	7,550.00	7,406.68	191.19	36.27	73.51	-1,245.53	367.50	7,012.39	6,910.70	101.69	68.958			
15,700.00	7,950.00	7,550.00	7,406.68	193.82	36.27	73.51	-1,245.53	367.50	7,108.65	7,006.91	101.74	69.871			
15,800.00	7,950.00	7,550.00	7,406.68	196.46	36.27	73.51	-1,245.53	367.50	7,205.00	7,103.21	101.79	70.785			
15,900.00	7,950.00	7,550.00	7,406.68	199.09	36.27	73.51	-1,245.53	367.50	7,301.45	7,199.62	101.83	71.700			
16,000.00	7,950.00	7,550.00	7,406.68	201.73	36.27	73.51	-1,245.53	367.50	7,398.00	7,296.12	101.88	72.615			
16,100.00	7,950.00	7,550.00	7,406.68	204.37	36.27	73.51	-1,245.53	367.50	7,494.64	7,392.71	101.92	73.531			
16,200.00	7,950.00	7,526.72	7,384.10	207.01	36.15	72.91	-1,241.00	364.14	7,590.87	7,488.96	101.91	74.488			
16,300.00	7,950.00	7,525.84	7,383.24	209.65	36.14	72.88	-1,240.82	364.03	7,687.64	7,585.69	101.95	75.407			
16,400.00	7,950.00	7,524.98	7,382.40	212.29	36.14	72.86	-1,240.66	363.93	7,784.49	7,682.50	101.99	76.326			
16,500.00	7,950.00	7,524.14	7,381.58	214.93	36.14	72.84	-1,240.49	363.83	7,881.41	7,779.38	102.03	77.246			
16,600.00	7,950.00	7,523.32	7,380.79	217.58	36.13	72.82	-1,240.33	363.73	7,978.42	7,876.35	102.07	78.166			
16,700.00	7,950.00	7,500.00	7,358.03	220.22	36.01	72.22	-1,235.78	361.44	8,075.95	7,973.90	102.05	79.136			
16,800.00	7,950.00	7,500.00	7,358.03	222.87	36.01	72.22	-1,235.78	361.44	8,173.06	8,070.97	102.09	80.054			
16,900.00	7,950.00	7,500.00	7,358.03	225.52	36.01	72.22	-1,235.78	361.44	8,270.25	8,168.11	102.14	80.973			
17,000.00	7,950.00	7,500.00	7,358.03	228.16	36.01	72.22	-1,235.78	361.44	8,367.49	8,265.32	102.18	81.892			
17,100.00	7,950.00	7,500.00	7,358.03	230.81	36.01	72.22	-1,235.78	361.44	8,464.80	8,362.59	102.22	82.812			
17,200.00	7,950.00	7,500.00	7,358.03	233.46	36.01	72.22	-1,235.78	361.44	8,562.18	8,459.92	102.26	83.731			
17,300.00	7,950.00	7,500.00	7,358.03	236.12	36.01	72.22	-1,235.78	361.44	8,659.61	8,557.31	102.30	84.650			
17,400.00	7,950.00	7,500.00	7,358.03	238.77	36.01	72.22	-1,235.78	361.44	8,757.10	8,654.76	102.34	85.570			
17,500.00	7,950.00	7,500.00	7,358.03	241.42	36.01	72.22	-1,235.78	361.44	8,854.65	8,752.27	102.38	86.489			
17,600.00	7,950.00	7,500.00	7,358.03	244.08	36.01	72.22	-1,235.78	361.44	8,952.25	8,849.83	102.42	87.408			
17,700.00	7,950.00	7,500.00	7,358.03	246.73	36.01	72.22	-1,235.78	361.44	9,049.90	8,947.44	102.46	88.328			
17,800.00	7,950.00	7,500.00	7,358.03	249.39	36.01	72.22	-1,235.78	361.44	9,147.61	9,045.11	102.50	89.247			
17,900.00	7,950.00	7,500.00	7,358.03	252.04	36.01	72.22	-1,235.78	361.44	9,245.36	9,142.82	102.54	90.165			
18,000.00	7,950.00	7,500.00	7,358.03	254.70	36.01	72.22	-1,235.78	361.44	9,343.16	9,240.58	102.58	91.084			
18,100.00	7,950.00	7,500.00	7,358.03	257.36	36.01	72.22	-1,235.78	361.44	9,441.01	9,338.39	102.62	92.003			
18,200.00	7,950.00	7,500.00	7,358.03	260.02	36.01	72.22	-1,235.78	361.44	9,538.90	9,436.24	102.66	92.921			
18,300.00	7,950.00	7,500.00	7,358.03	262.67	36.01	72.22	-1,235.78	361.44	9,636.83	9,534.14	102.70	93.839			
18,400.00	7,950.00	7,500.00	7,358.03	265.33	36.01	72.22	-1,235.78	361.44	9,734.81	9,632.08	102.74	94.756			
18,500.00	7,950.00	7,500.00	7,358.03	267.99	36.01	72.22	-1,235.78	361.44	9,832.83	9,730.05	102.78	95.673			
18,600.00	7,950.00	7,500.00	7,358.03	270.66	36.01	72.22	-1,235.78	361.44	9,930.89	9,828.07	102.82	96.590			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis			Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.10	0.10	0.00	0.00	-0.21	75.04	-0.28	75.04					
100.00	100.00	100.10	100.10	0.13	0.13	-0.21	75.04	-0.28	75.04	74.77	0.27	278.738		
200.00	200.00	200.10	200.10	0.49	0.49	-0.21	75.04	-0.28	75.04	74.05	0.99	76.093		
250.00	250.00	250.10	250.10	0.67	0.67	-0.21	75.04	-0.28	75.04	73.70	1.34	55.807		
300.00	300.00	301.42	301.42	0.84	0.85	-163.64	74.59	-0.19	75.02	73.32	1.69	44.338		
400.00	399.93	404.06	403.99	1.19	1.20	-163.88	70.97	0.51	74.84	72.47	2.38	31.461		
500.00	499.68	506.69	506.35	1.54	1.56	-164.37	63.76	1.92	74.51	71.42	3.08	24.156		
600.00	599.13	609.31	608.36	1.92	1.95	-165.12	52.95	4.04	74.01	70.21	3.80	19.486		
700.00	698.15	711.90	709.90	2.32	2.37	-166.13	38.57	6.85	73.38	68.85	4.52	16.231		
800.00	796.63	814.48	810.83	2.74	2.81	-167.41	20.64	10.36	72.61	67.36	5.25	13.835		
900.00	894.44	917.02	911.01	3.20	3.29	-168.98	-0.83	14.56	71.75	65.77	5.98	11.994		
1,000.00	991.46	1,019.53	1,010.31	3.70	3.80	-170.85	-25.79	19.44	70.81	64.09	6.72	10.539		
1,034.26	1,024.50	1,053.96	1,043.48	3.89	3.99	-171.56	-34.83	21.20	70.61	63.63	6.98	10.111	CC, ES	
1,100.00	1,087.58	1,119.67	1,106.79	4.24	4.34	-173.03	-52.10	24.58	71.38	63.90	7.48	9.537		
1,200.00	1,182.68	1,219.53	1,203.01	4.83	4.89	-175.37	-78.34	29.71	75.52	67.25	8.27	9.134	SF	
1,300.00	1,276.65	1,319.18	1,299.02	5.46	5.44	-177.58	-104.54	34.84	83.26	74.19	9.07	9.184		
1,400.00	1,369.36	1,418.49	1,394.70	6.14	5.99	-179.43	-130.64	39.94	94.57	84.69	9.88	9.574		
1,471.15	1,434.50	1,488.88	1,462.52	6.66	6.39	179.51	-149.14	43.56	104.77	94.31	10.46	10.012		
1,500.00	1,460.77	1,517.37	1,489.97	6.87	6.55	179.14	-156.63	45.02	109.27	98.57	10.70	10.209		
1,600.00	1,551.82	1,616.12	1,585.11	7.62	7.11	178.06	-182.58	50.10	124.90	113.37	11.53	10.829		
1,700.00	1,642.88	1,714.87	1,680.25	8.38	7.68	177.22	-208.54	55.17	140.56	128.19	12.37	11.361		
1,800.00	1,733.93	1,813.61	1,775.39	9.15	8.24	176.55	-234.49	60.25	156.25	143.03	13.22	11.822		
1,900.00	1,824.98	1,912.36	1,870.53	9.93	8.81	176.00	-260.44	65.33	171.95	157.89	14.07	12.224		
2,000.00	1,916.03	2,011.11	1,965.67	10.71	9.37	175.54	-286.40	70.40	187.67	172.75	14.92	12.578		
2,100.00	2,007.08	2,109.85	2,060.81	11.49	9.94	175.16	-312.35	75.48	203.39	187.61	15.78	12.891		
2,200.00	2,098.13	2,208.60	2,155.95	12.28	10.51	174.83	-338.31	80.55	219.13	202.49	16.64	13.169		
2,300.00	2,189.19	2,307.35	2,251.09	13.07	11.08	174.54	-364.26	85.63	234.87	217.36	17.50	13.419		
2,400.00	2,280.24	2,406.10	2,346.23	13.86	11.65	174.29	-390.22	90.70	250.61	232.24	18.37	13.644		
2,500.00	2,371.29	2,504.84	2,441.37	14.65	12.22	174.07	-416.17	95.78	266.36	247.12	19.24	13.847		
2,600.00	2,462.34	2,603.59	2,536.51	15.44	12.79	173.87	-442.12	100.86	282.11	262.01	20.11	14.032		
2,700.00	2,553.39	2,702.34	2,631.65	16.24	13.37	173.70	-468.08	105.93	297.87	276.89	20.98	14.200		
2,800.00	2,644.45	2,801.08	2,726.79	17.03	13.94	173.54	-494.03	111.01	313.62	291.78	21.85	14.355		
2,900.00	2,735.50	2,900.17	2,821.93	17.83	14.51	173.40	-519.99	116.08	329.38	306.66	22.72	14.496		
3,000.00	2,826.55	3,001.42	2,917.07	18.63	15.10	173.27	-545.94	121.16	345.14	321.54	23.61	14.621		
3,100.00	2,917.60	3,097.33	3,012.21	19.43	15.66	173.15	-571.90	126.23	360.91	336.44	24.47	14.749		
3,200.00	3,008.65	3,203.93	3,107.35	20.23	16.28	173.04	-597.85	131.31	376.67	351.29	25.38	14.842		
3,300.00	3,099.70	3,305.18	3,202.49	21.03	16.87	172.94	-623.81	136.38	392.44	366.17	26.26	14.941		
3,400.00	3,190.76	3,406.43	3,297.63	21.83	17.45	172.85	-649.76	141.46	408.20	381.05	27.15	15.034		
3,500.00	3,281.81	3,492.32	3,392.77	22.63	17.95	172.77	-675.71	146.54	423.97	395.99	27.98	15.154		
3,600.00	3,372.86	3,591.06	3,487.91	23.43	18.53	172.69	-701.67	151.61	439.74	410.88	28.86	15.240		
3,700.00	3,463.91	3,689.81	3,583.05	24.23	19.10	172.61	-727.62	156.69	455.51	425.77	29.73	15.319		
3,800.00	3,554.96	3,788.56	3,678.19	25.03	19.68	172.55	-753.58	161.76	471.28	440.66	30.61	15.395		
3,900.00	3,646.01	3,887.30	3,773.33	25.83	20.25	172.48	-779.53	166.84	487.05	455.55	31.49	15.465		
4,000.00	3,737.07	3,986.05	3,868.47	26.63	20.83	172.42	-805.49	171.91	502.82	470.45	32.37	15.532		
4,100.00	3,828.12	4,084.80	3,963.61	27.43	21.40	172.36	-831.44	176.99	518.59	485.34	33.25	15.595		
4,200.00	3,919.17	4,183.55	4,058.75	28.24	21.98	172.31	-857.39	182.07	534.36	500.23	34.13	15.655		
4,300.00	4,010.22	4,282.29	4,153.89	29.04	22.55	172.26	-883.35	187.14	550.13	515.12	35.01	15.712		
4,400.00	4,101.27	4,381.04	4,249.03	29.84	23.13	172.21	-909.30	192.22	565.91	530.01	35.90	15.765		
4,500.00	4,192.33	4,479.79	4,344.17	30.65	23.70	172.17	-935.26	197.29	581.68	544.90	36.78	15.816		
4,600.00	4,283.38	4,578.54	4,439.31	31.45	24.28	172.13	-961.21	202.37	597.45	559.79	37.66	15.865		
4,700.00	4,374.43	4,677.28	4,534.45	32.25	24.85	172.09	-987.17	207.44	613.23	574.68	38.54	15.911		
4,800.00	4,465.48	4,776.03	4,629.59	33.05	25.43	172.05	-1,013.12	212.52	629.00	589.58	39.42	15.955		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft	
Survey Program: 0-MWD OWSG													Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,874.78	4,724.73	33.86	26.00	172.01	-1,039.07	217.60	644.77	604.47	40.31	15.997			
5,000.00	4,647.58	4,973.52	4,819.87	34.66	26.58	171.98	-1,065.03	222.67	660.55	619.36	41.19	16.037			
5,100.00	4,738.64	5,072.27	4,915.01	35.47	27.15	171.94	-1,090.98	227.75	676.32	634.25	42.07	16.076			
5,200.00	4,829.69	5,171.02	5,010.15	36.27	27.73	171.91	-1,116.94	232.82	692.10	649.14	42.95	16.113			
5,300.00	4,920.74	5,269.77	5,105.29	37.07	28.31	171.88	-1,142.89	237.90	707.87	664.04	43.84	16.148			
5,400.00	5,011.79	5,368.51	5,200.43	37.88	28.88	171.85	-1,168.85	242.97	723.65	678.93	44.72	16.182			
5,500.00	5,102.84	5,467.26	5,295.57	38.68	29.46	171.83	-1,194.80	248.05	739.42	693.82	45.60	16.214			
5,600.00	5,193.89	5,566.01	5,390.71	39.48	30.03	171.80	-1,220.75	253.12	755.20	708.71	46.49	16.245			
5,700.00	5,284.95	5,664.75	5,485.85	40.29	30.61	171.77	-1,246.71	258.20	770.97	723.60	47.37	16.275			
5,800.00	5,376.00	5,763.50	5,580.99	41.09	31.18	171.75	-1,272.66	263.28	786.75	738.50	48.25	16.304			
5,900.00	5,467.05	5,862.25	5,676.13	41.90	31.76	171.73	-1,298.62	268.35	802.53	753.39	49.14	16.332			
6,000.00	5,558.10	5,961.00	5,771.27	42.70	32.34	171.70	-1,324.57	273.43	818.30	768.28	50.02	16.359			
6,100.00	5,649.15	6,059.74	5,866.41	43.51	32.91	171.68	-1,350.53	278.50	834.08	783.17	50.91	16.385			
6,200.00	5,740.21	6,158.49	5,961.55	44.31	33.49	171.66	-1,376.48	283.58	849.86	798.06	51.79	16.410			
6,300.00	5,831.26	6,257.24	6,056.69	45.11	34.06	171.64	-1,402.43	288.65	865.63	812.96	52.67	16.434			
6,400.00	5,922.31	6,355.99	6,151.83	45.92	34.64	171.62	-1,428.39	293.73	881.41	827.85	53.56	16.457			
6,500.00	6,013.36	6,454.73	6,246.97	46.72	35.22	171.60	-1,454.34	298.81	897.18	842.74	54.44	16.479			
6,600.00	6,104.41	6,553.48	6,342.11	47.53	35.79	171.59	-1,480.30	303.88	912.96	857.63	55.33	16.501			
6,700.00	6,195.46	6,652.23	6,437.25	48.33	36.37	171.57	-1,506.25	308.96	928.74	872.53	56.21	16.522			
6,800.00	6,286.52	6,750.97	6,532.39	49.14	36.94	171.55	-1,532.21	314.03	944.52	887.42	57.10	16.542			
6,900.00	6,377.57	6,849.72	6,627.53	49.94	37.52	171.54	-1,558.16	319.11	960.29	902.31	57.98	16.562			
7,000.00	6,468.62	6,948.47	6,722.67	50.75	38.10	171.52	-1,584.12	324.18	976.07	917.20	58.87	16.581			
7,100.00	6,559.67	7,047.22	6,817.81	51.55	38.67	171.50	-1,610.07	329.26	991.85	932.09	59.75	16.599			
7,200.00	6,650.72	7,145.96	6,912.95	52.36	39.25	171.49	-1,636.02	334.33	1,007.62	946.99	60.64	16.617			
7,300.00	6,741.77	7,244.71	7,008.09	53.16	39.82	171.48	-1,661.98	339.41	1,023.40	961.88	61.52	16.635			
7,400.00	6,832.83	7,343.46	7,103.23	53.97	40.40	171.46	-1,687.93	344.49	1,039.18	976.77	62.41	16.651			
7,500.00	6,923.88	7,442.21	7,198.37	54.77	40.98	171.45	-1,713.89	349.56	1,054.96	991.66	63.29	16.668			
7,600.00	7,014.93	7,540.95	7,293.51	55.58	41.55	171.44	-1,739.84	354.64	1,070.73	1,006.55	64.18	16.684			
7,700.00	7,105.98	7,639.70	7,388.65	56.38	42.13	171.42	-1,765.80	359.71	1,086.51	1,021.45	65.06	16.699			
7,800.00	7,197.03	7,738.45	7,483.79	57.19	42.71	171.41	-1,791.75	364.79	1,102.28	1,036.33	65.94	16.714			
7,900.00	7,288.09	7,837.20	7,578.93	57.99	43.29	171.40	-1,817.70	369.86	1,118.11	1,051.11	66.82	16.728			
7,982.08	7,362.82	8,368.20	7,922.84	58.65	46.65	-170.48	-1,915.71	754.92	1,071.81	1,003.54	68.27	15.699			
8,000.00	7,379.16	8,383.55	7,927.23	58.79	46.75	-173.37	-1,917.08	769.56	1,069.56	1,000.70	68.86	15.532			
8,050.00	7,424.95	8,412.90	7,934.58	59.18	46.95	177.35	-1,919.40	797.88	1,064.24	993.91	70.33	15.133			
8,100.00	7,470.74	8,428.00	7,937.81	59.53	47.05	167.17	-1,920.45	812.59	1,060.79	989.29	71.51	14.835			
8,150.00	7,516.17	8,433.61	7,938.91	59.84	47.09	157.19	-1,920.81	818.08	1,059.52	987.12	72.40	14.634			
8,153.19	7,519.05	8,433.72	7,938.93	59.86	47.09	156.57	-1,920.82	818.19	1,059.51	987.07	72.45	14.624			
8,200.00	7,560.91	8,432.68	7,938.73	60.13	47.08	148.06	-1,920.75	817.17	1,060.51	987.46	73.05	14.517			
8,250.00	7,604.61	8,427.09	7,937.62	60.38	47.04	140.02	-1,920.39	811.70	1,063.76	990.26	73.50	14.473			
8,300.00	7,646.94	8,418.08	7,935.73	60.60	46.98	133.01	-1,919.77	802.92	1,069.15	995.37	73.78	14.491			
8,350.00	7,687.58	8,406.51	7,933.10	60.78	46.90	126.86	-1,918.93	791.69	1,076.52	1,002.59	73.93	14.562			
8,400.00	7,726.22	8,392.97	7,929.74	60.94	46.81	121.40	-1,917.86	778.61	1,085.68	1,011.70	73.98	14.674			
8,450.00	7,762.57	8,377.88	7,925.65	61.07	46.71	116.47	-1,916.58	764.14	1,096.40	1,022.42	73.98	14.820			
8,500.00	7,796.34	8,361.56	7,920.82	61.18	46.61	111.97	-1,915.09	748.63	1,108.44	1,034.50	73.94	14.991			
8,550.00	7,827.28	8,344.26	7,915.23	61.26	46.49	107.82	-1,913.38	732.34	1,121.55	1,047.65	73.90	15.177			
8,600.00	7,855.16	8,326.14	7,908.87	61.31	46.37	103.98	-1,911.46	715.49	1,135.48	1,061.59	73.89	15.368			
8,650.00	7,879.76	8,307.36	7,901.73	61.35	46.25	100.42	-1,909.32	698.24	1,149.98	1,076.07	73.92	15.558			
8,700.00	7,900.90	8,288.02	7,893.82	61.37	46.13	97.14	-1,906.97	680.76	1,164.82	1,090.80	74.01	15.738			
8,750.00	7,918.42	8,268.22	7,885.13	61.37	46.00	94.12	-1,904.40	663.15	1,179.76	1,105.57	74.19	15.903			
8,800.00	7,932.18	8,250.00	7,876.63	61.35	45.89	91.44	-1,901.90	647.24	1,194.59	1,120.07	74.53	16.029			
8,850.00	7,942.07	8,227.51	7,865.46	61.31	45.74	88.91	-1,898.64	627.99	1,209.11	1,134.32	74.79	16.166			
8,900.00	7,948.03	8,200.00	7,850.82	61.26	45.57	86.53	-1,894.40	605.09	1,223.17	1,148.24	74.93	16.324			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 3BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
8,949.68	7,950.00	8,185.82	7,842.86	61.20	45.48	84.85	-1,892.10	593.59	1,236.41	1,160.67	75.74	16.324			
9,000.00	7,950.00	8,165.13	7,830.76	61.14	45.35	84.29	-1,888.62	577.17	1,250.08	1,173.75	76.34	16.376			
9,100.00	7,950.00	8,127.29	7,807.18	61.03	45.12	83.21	-1,881.87	548.36	1,280.90	1,203.22	77.68	16.488			
9,200.00	7,950.00	8,100.00	7,789.06	60.93	44.95	82.39	-1,876.71	528.62	1,316.63	1,237.16	79.46	16.569			
9,300.00	7,950.00	8,063.38	7,763.35	60.85	44.72	81.24	-1,869.43	503.59	1,357.08	1,276.25	80.82	16.790			
9,400.00	7,950.00	8,036.46	7,743.50	60.80	44.55	80.37	-1,863.83	486.30	1,402.19	1,319.70	82.49	16.998			
9,500.00	7,950.00	8,000.00	7,715.39	60.77	44.33	79.16	-1,855.93	464.47	1,451.84	1,368.13	83.71	17.344			
9,600.00	7,950.00	8,000.00	7,715.39	60.76	44.33	79.16	-1,855.93	464.47	1,505.41	1,419.35	86.06	17.493			
9,700.00	7,950.00	7,971.34	7,692.39	60.79	44.15	78.19	-1,849.49	448.63	1,562.79	1,475.50	87.29	17.904			
9,800.00	7,950.00	7,950.00	7,674.78	60.86	44.01	77.45	-1,844.57	437.63	1,623.79	1,535.18	88.61	18.325			
9,900.00	7,950.00	7,950.00	7,674.78	60.99	44.01	77.45	-1,844.57	437.63	1,688.13	1,597.74	90.38	18.678			
10,000.00	7,950.00	7,923.50	7,652.38	61.21	43.85	76.53	-1,838.33	424.93	1,755.13	1,663.85	91.28	19.228			
10,100.00	7,950.00	7,900.00	7,632.06	61.56	43.70	75.71	-1,832.68	414.58	1,825.05	1,732.90	92.15	19.806			
10,200.00	7,950.00	7,900.00	7,632.06	62.08	43.70	75.71	-1,832.68	414.58	1,897.17	1,803.73	93.44	20.303			
10,300.00	7,950.00	7,900.00	7,632.06	62.87	43.70	75.71	-1,832.68	414.58	1,971.73	1,877.15	94.58	20.847			
10,400.00	7,950.00	7,877.22	7,611.98	63.95	43.56	74.91	-1,827.11	405.37	2,047.95	1,952.81	95.15	21.524			
10,500.00	7,950.00	7,867.89	7,603.65	65.35	43.51	74.59	-1,824.80	401.84	2,126.12	2,030.23	95.89	22.173			
10,600.00	7,950.00	7,850.00	7,587.55	67.00	43.39	73.96	-1,820.34	395.47	2,205.98	2,109.58	96.40	22.885			
10,700.00	7,950.00	7,850.00	7,587.55	68.85	43.39	73.96	-1,820.34	395.47	2,287.13	2,190.00	97.13	23.546			
10,800.00	7,950.00	7,850.00	7,587.55	70.83	43.39	73.96	-1,820.34	395.47	2,369.73	2,271.94	97.79	24.233			
10,900.00	7,950.00	7,850.00	7,587.55	72.91	43.39	73.96	-1,820.34	395.47	2,453.62	2,355.25	98.37	24.944			
11,000.00	7,950.00	7,830.45	7,569.73	75.07	43.27	73.28	-1,815.42	389.11	2,538.31	2,439.69	98.62	25.739			
11,100.00	7,950.00	7,824.41	7,564.19	77.28	43.24	73.07	-1,813.89	387.27	2,624.15	2,525.14	99.01	26.504			
11,200.00	7,950.00	7,800.00	7,541.59	79.54	43.09	72.22	-1,807.66	380.46	2,711.25	2,612.12	99.13	27.350			
11,300.00	7,950.00	7,800.00	7,541.59	81.83	43.09	72.22	-1,807.66	380.46	2,798.66	2,699.14	99.52	28.120			
11,400.00	7,950.00	7,800.00	7,541.59	84.16	43.09	72.22	-1,807.66	380.46	2,886.89	2,787.02	99.88	28.904			
11,500.00	7,950.00	7,800.00	7,541.59	86.51	43.09	72.22	-1,807.66	380.46	2,975.87	2,875.68	100.19	29.701			
11,600.00	7,950.00	7,800.00	7,541.59	88.89	43.09	72.22	-1,807.66	380.46	3,065.52	2,965.05	100.48	30.510			
11,700.00	7,950.00	7,800.00	7,541.59	91.29	43.09	72.22	-1,807.66	380.46	3,155.80	3,055.07	100.73	31.328			
11,800.00	7,950.00	7,800.00	7,541.59	93.71	43.09	72.22	-1,807.66	380.46	3,246.65	3,145.68	100.96	32.156			
11,900.00	7,950.00	7,800.00	7,541.59	96.14	43.09	72.22	-1,807.66	380.46	3,338.02	3,236.84	101.17	32.993			
12,000.00	7,950.00	7,800.00	7,541.59	98.59	43.09	72.22	-1,807.66	380.46	3,429.87	3,328.51	101.36	33.838			
12,100.00	7,950.00	7,800.00	7,541.59	101.05	43.09	72.22	-1,807.66	380.46	3,522.16	3,420.63	101.53	34.689			
12,200.00	7,950.00	7,777.20	7,520.24	103.52	42.95	71.43	-1,801.79	375.01	3,614.37	3,512.86	101.51	35.606			
12,300.00	7,950.00	7,774.13	7,517.35	106.01	42.93	71.33	-1,800.99	374.35	3,707.31	3,605.67	101.64	36.476			
12,400.00	7,950.00	7,771.20	7,514.59	108.50	42.91	71.23	-1,800.24	373.73	3,800.59	3,698.84	101.75	37.352			
12,500.00	7,950.00	7,750.00	7,494.53	111.01	42.78	70.50	-1,794.73	369.67	3,894.52	3,792.80	101.72	38.285			
12,600.00	7,950.00	7,750.00	7,494.53	113.52	42.78	70.50	-1,794.73	369.67	3,988.33	3,886.48	101.84	39.161			
12,700.00	7,950.00	7,750.00	7,494.53	116.04	42.78	70.50	-1,794.73	369.67	4,082.43	3,980.47	101.96	40.041			
12,800.00	7,950.00	7,750.00	7,494.53	118.57	42.78	70.50	-1,794.73	369.67	4,176.81	4,074.75	102.06	40.925			
12,900.00	7,950.00	7,750.00	7,494.53	121.11	42.78	70.50	-1,794.73	369.67	4,271.44	4,169.29	102.16	41.813			
13,000.00	7,950.00	7,750.00	7,494.53	123.65	42.78	70.50	-1,794.73	369.67	4,366.31	4,264.07	102.24	42.705			
13,100.00	7,950.00	7,750.00	7,494.53	126.20	42.78	70.50	-1,794.73	369.67	4,461.41	4,359.08	102.33	43.599			
13,200.00	7,950.00	7,750.00	7,494.53	128.75	42.78	70.50	-1,794.73	369.67	4,556.72	4,454.31	102.40	44.497			
13,300.00	7,950.00	7,750.00	7,494.53	131.31	42.78	70.50	-1,794.73	369.67	4,652.22	4,549.74	102.48	45.398			
13,400.00	7,950.00	7,750.00	7,494.53	133.88	42.78	70.50	-1,794.73	369.67	4,747.91	4,645.37	102.54	46.301			
13,500.00	7,950.00	7,750.00	7,494.53	136.45	42.78	70.50	-1,794.73	369.67	4,843.77	4,741.16	102.61	47.207			
13,600.00	7,950.00	7,750.00	7,494.53	139.02	42.78	70.50	-1,794.73	369.67	4,939.80	4,837.13	102.67	48.114			
13,700.00	7,950.00	7,750.00	7,494.53	141.60	42.78	70.50	-1,794.73	369.67	5,035.98	4,933.26	102.73	49.024			
13,800.00	7,950.00	7,750.00	7,494.53	144.19	42.78	70.50	-1,794.73	369.67	5,132.31	5,029.53	102.78	49.935			
13,900.00	7,950.00	7,750.00	7,494.53	146.77	42.78	70.50	-1,794.73	369.67	5,228.77	5,125.94	102.83	50.849			
14,000.00	7,950.00	7,750.00	7,494.53	149.36	42.78	70.50	-1,794.73	369.67	5,325.37	5,222.49	102.88	51.763			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 3BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,100.00	7,950.00	7,750.00	7,494.53	151.96	42.78	70.50	-1,794.73	369.67	5,422.09	5,319.16	102.93	52.680			
14,200.00	7,950.00	7,750.00	7,494.53	154.56	42.78	70.50	-1,794.73	369.67	5,518.92	5,415.95	102.97	53.597			
14,300.00	7,950.00	7,750.00	7,494.53	157.16	42.78	70.50	-1,794.73	369.67	5,615.87	5,512.86	103.01	54.516			
14,400.00	7,950.00	7,750.00	7,494.53	159.76	42.78	70.50	-1,794.73	369.67	5,712.92	5,609.87	103.06	55.436			
14,500.00	7,950.00	7,750.00	7,494.53	162.37	42.78	70.50	-1,794.73	369.67	5,810.08	5,706.98	103.10	56.356			
14,600.00	7,950.00	7,750.00	7,494.53	164.98	42.78	70.50	-1,794.73	369.67	5,907.32	5,804.19	103.13	57.278			
14,700.00	7,950.00	7,750.00	7,494.53	167.59	42.78	70.50	-1,794.73	369.67	6,004.66	5,901.49	103.17	58.201			
14,800.00	7,950.00	7,727.29	7,472.88	170.20	42.64	69.74	-1,788.80	366.18	6,101.60	5,998.49	103.11	59.177			
14,900.00	7,950.00	7,726.14	7,471.78	172.82	42.64	69.70	-1,788.50	366.03	6,199.06	6,095.92	103.14	60.103			
15,000.00	7,950.00	7,725.02	7,470.71	175.44	42.63	69.66	-1,788.20	365.88	6,296.59	6,193.42	103.17	61.030			
15,100.00	7,950.00	7,723.94	7,469.68	178.06	42.62	69.63	-1,787.92	365.74	6,394.20	6,291.00	103.20	61.957			
15,200.00	7,950.00	7,722.88	7,468.67	180.68	42.62	69.59	-1,787.64	365.61	6,491.88	6,388.64	103.23	62.885			
15,300.00	7,950.00	7,700.00	7,446.72	183.31	42.48	68.83	-1,781.64	363.17	6,590.07	6,486.90	103.17	63.875			
15,400.00	7,950.00	7,700.00	7,446.72	185.93	42.48	68.83	-1,781.64	363.17	6,687.84	6,584.63	103.21	64.800			
15,500.00	7,950.00	7,700.00	7,446.72	188.56	42.48	68.83	-1,781.64	363.17	6,785.68	6,682.43	103.24	65.726			
15,600.00	7,950.00	7,700.00	7,446.72	191.19	42.48	68.83	-1,781.64	363.17	6,883.57	6,780.30	103.28	66.652			
15,700.00	7,950.00	7,700.00	7,446.72	193.82	42.48	68.83	-1,781.64	363.17	6,981.53	6,878.22	103.31	67.578			
15,800.00	7,950.00	7,700.00	7,446.72	196.46	42.48	68.83	-1,781.64	363.17	7,079.54	6,976.20	103.34	68.504			
15,900.00	7,950.00	7,700.00	7,446.72	199.09	42.48	68.83	-1,781.64	363.17	7,177.61	7,074.24	103.38	69.431			
16,000.00	7,950.00	7,700.00	7,446.72	201.73	42.48	68.83	-1,781.64	363.17	7,275.74	7,172.32	103.41	70.357			
16,100.00	7,950.00	7,700.00	7,446.72	204.37	42.48	68.83	-1,781.64	363.17	7,373.91	7,270.46	103.44	71.284			
16,200.00	7,950.00	7,700.00	7,446.72	207.01	42.48	68.83	-1,781.64	363.17	7,472.13	7,368.65	103.48	72.210			
16,300.00	7,950.00	7,700.00	7,446.72	209.65	42.48	68.83	-1,781.64	363.17	7,570.40	7,466.89	103.51	73.136			
16,400.00	7,950.00	7,700.00	7,446.72	212.29	42.48	68.83	-1,781.64	363.17	7,668.71	7,565.16	103.54	74.062			
16,500.00	7,950.00	7,700.00	7,446.72	214.93	42.48	68.83	-1,781.64	363.17	7,767.06	7,663.49	103.58	74.988			
16,600.00	7,950.00	7,700.00	7,446.72	217.58	42.48	68.83	-1,781.64	363.17	7,865.46	7,761.85	103.61	75.914			
16,700.00	7,950.00	7,700.00	7,446.72	220.22	42.48	68.83	-1,781.64	363.17	7,963.90	7,860.25	103.64	76.840			
16,800.00	7,950.00	7,700.00	7,446.72	222.87	42.48	68.83	-1,781.64	363.17	8,062.37	7,958.70	103.68	77.765			
16,900.00	7,950.00	7,700.00	7,446.72	225.52	42.48	68.83	-1,781.64	363.17	8,160.88	8,057.17	103.71	78.690			
17,000.00	7,950.00	7,700.00	7,446.72	228.16	42.48	68.83	-1,781.64	363.17	8,259.43	8,155.69	103.74	79.614			
17,100.00	7,950.00	7,700.00	7,446.72	230.81	42.48	68.83	-1,781.64	363.17	8,358.01	8,254.24	103.78	80.538			
17,200.00	7,950.00	7,700.00	7,446.72	233.46	42.48	68.83	-1,781.64	363.17	8,456.63	8,352.82	103.81	81.462			
17,300.00	7,950.00	7,700.00	7,446.72	236.12	42.48	68.83	-1,781.64	363.17	8,555.28	8,451.43	103.84	82.385			
17,400.00	7,950.00	7,700.00	7,446.72	238.77	42.48	68.83	-1,781.64	363.17	8,653.96	8,550.08	103.88	83.308			
17,500.00	7,950.00	7,700.00	7,446.72	241.42	42.48	68.83	-1,781.64	363.17	8,752.67	8,648.75	103.91	84.230			
17,600.00	7,950.00	7,700.00	7,446.72	244.08	42.48	68.83	-1,781.64	363.17	8,851.40	8,747.46	103.95	85.152			
17,700.00	7,950.00	7,700.00	7,446.72	246.73	42.48	68.83	-1,781.64	363.17	8,950.17	8,846.19	103.98	86.073			
17,800.00	7,950.00	7,700.00	7,446.72	249.39	42.48	68.83	-1,781.64	363.17	9,048.96	8,944.94	104.02	86.993			
17,900.00	7,950.00	7,700.00	7,446.72	252.04	42.48	68.83	-1,781.64	363.17	9,147.78	9,043.73	104.05	87.913			
18,000.00	7,950.00	7,700.00	7,446.72	254.70	42.48	68.83	-1,781.64	363.17	9,246.63	9,142.54	104.09	88.833			
18,100.00	7,950.00	7,700.00	7,446.72	257.36	42.48	68.83	-1,781.64	363.17	9,345.50	9,241.37	104.13	89.751			
18,200.00	7,950.00	7,700.00	7,446.72	260.02	42.48	68.83	-1,781.64	363.17	9,444.39	9,340.23	104.16	90.669			
18,300.00	7,950.00	7,700.00	7,446.72	262.67	42.48	68.83	-1,781.64	363.17	9,543.31	9,439.11	104.20	91.587			
18,400.00	7,950.00	7,700.00	7,446.72	265.33	42.48	68.83	-1,781.64	363.17	9,642.24	9,538.01	104.24	92.503			
18,500.00	7,950.00	7,700.00	7,446.72	267.99	42.48	68.83	-1,781.64	363.17	9,741.20	9,636.93	104.27	93.419			
18,600.00	7,950.00	7,700.00	7,446.72	270.66	42.48	68.83	-1,781.64	363.17	9,840.19	9,735.87	104.31	94.334			
18,700.00	7,950.00	7,700.00	7,446.72	273.32	42.48	68.83	-1,781.64	363.17	9,939.19	9,834.84	104.35	95.248			

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.13	0.00	25.13					
100.00	100.00	100.00	100.00	0.13	0.13	0.00	25.13	0.00	25.13	24.86	0.27	93.471		
200.00	200.00	200.00	200.00	0.49	0.49	0.00	25.13	0.00	25.13	24.14	0.99	25.492		
250.00	250.00	250.00	250.00	0.67	0.67	0.00	25.13	0.00	25.13	23.79	1.34	18.694		
300.00	300.00	300.44	300.43	0.84	0.84	-163.52	24.69	0.07	25.11	23.42	1.69	14.873		
400.00	399.93	401.31	401.24	1.19	1.19	-164.59	21.18	0.61	24.98	22.61	2.37	10.546		
500.00	499.68	502.17	501.85	1.54	1.55	-166.74	14.17	1.70	24.75	21.68	3.07	8.068		
600.00	599.13	603.03	602.14	1.92	1.93	-170.03	3.66	3.33	24.47	20.69	3.77	6.483		
700.00	698.15	703.87	701.97	2.32	2.33	-174.52	-10.32	5.49	24.22	19.73	4.49	5.399		
792.88	789.64	797.51	794.18	2.71	2.73	-179.75	-26.41	7.99	24.12	18.96	5.16	4.677	CC	
800.00	796.63	804.68	801.23	2.74	2.76	179.80	-27.77	8.20	24.12	18.91	5.21	4.631		
900.00	894.44	905.48	899.77	3.20	3.23	173.03	-48.65	11.43	24.31	18.36	5.95	4.083		
1,000.00	991.46	1,006.24	997.49	3.70	3.74	165.41	-72.94	15.20	24.95	18.19	6.76	3.692	ES	
1,100.00	1,087.58	1,106.98	1,094.25	4.24	4.28	157.33	-100.60	19.48	26.17	18.51	7.66	3.418		
1,200.00	1,182.68	1,207.67	1,189.94	4.83	4.87	149.29	-131.59	24.28	28.09	19.39	8.70	3.228		
1,300.00	1,276.65	1,307.78	1,284.22	5.46	5.49	142.94	-164.83	29.44	31.41	21.53	9.88	3.178	SF	
1,400.00	1,369.36	1,407.58	1,378.17	6.14	6.13	141.23	-198.10	34.59	37.60	26.59	11.01	3.415		
1,471.15	1,434.50	1,478.46	1,444.90	6.66	6.59	142.07	-221.73	38.25	43.67	31.92	11.74	3.718		
1,500.00	1,460.77	1,507.18	1,471.93	6.87	6.77	142.64	-231.30	39.74	46.41	34.38	12.03	3.857		
1,600.00	1,551.82	1,606.71	1,565.63	7.62	7.42	144.19	-264.49	44.88	55.96	42.92	13.04	4.291		
1,700.00	1,642.88	1,706.25	1,659.33	8.38	8.08	145.29	-297.67	50.02	65.54	51.47	14.07	4.659		
1,800.00	1,733.93	1,805.78	1,753.03	9.15	8.74	146.10	-330.85	55.16	75.13	60.03	15.10	4.975		
1,900.00	1,824.98	1,905.31	1,846.72	9.93	9.40	146.74	-364.03	60.30	84.74	68.60	16.14	5.249		
2,000.00	1,916.03	2,004.85	1,940.42	10.71	10.06	147.24	-397.21	65.44	94.35	77.16	17.19	5.488		
2,100.00	2,007.08	2,104.38	2,034.12	11.49	10.73	147.65	-430.40	70.59	103.98	85.73	18.25	5.699		
2,200.00	2,098.13	2,203.91	2,127.82	12.28	11.39	147.99	-463.58	75.73	113.60	94.30	19.30	5.885		
2,300.00	2,189.19	2,303.45	2,221.52	13.07	12.06	148.28	-496.76	80.87	123.23	102.86	20.37	6.051		
2,400.00	2,280.24	2,402.98	2,315.22	13.86	12.73	148.52	-529.94	86.01	132.86	111.43	21.43	6.200		
2,500.00	2,371.29	2,502.51	2,408.92	14.65	13.40	148.74	-563.12	91.15	142.49	120.00	22.50	6.334		
2,600.00	2,462.34	2,602.05	2,502.62	15.44	14.07	148.92	-596.31	96.30	152.13	128.56	23.56	6.456		
2,700.00	2,553.39	2,701.58	2,596.32	16.24	14.75	149.09	-629.49	101.44	161.76	137.13	24.63	6.567		
2,800.00	2,644.45	2,801.12	2,690.01	17.03	15.42	149.23	-662.67	106.58	171.40	145.70	25.71	6.668		
2,900.00	2,735.50	2,900.65	2,783.71	17.83	16.09	149.36	-695.85	111.72	181.04	154.26	26.78	6.761		
3,000.00	2,826.55	3,000.18	2,877.41	18.63	16.76	149.48	-729.03	116.86	190.68	162.83	27.85	6.846		
3,100.00	2,917.60	3,099.72	2,971.11	19.43	17.44	149.58	-762.22	122.00	200.32	171.39	28.93	6.925		
3,200.00	3,008.65	3,200.75	3,064.81	20.23	18.12	149.68	-795.40	127.15	209.96	179.95	30.01	6.996		
3,300.00	3,099.70	3,298.78	3,158.51	21.03	18.79	149.76	-828.58	132.29	219.60	188.52	31.08	7.065		
3,400.00	3,190.76	3,401.68	3,252.21	21.83	19.49	149.84	-861.76	137.43	229.24	197.07	32.18	7.124		
3,500.00	3,281.81	3,497.85	3,345.91	22.63	20.14	149.92	-894.94	142.57	238.89	205.65	33.24	7.187		
3,600.00	3,372.86	3,602.62	3,439.60	23.43	20.85	149.99	-928.13	147.71	248.53	214.18	34.35	7.236		
3,700.00	3,463.91	3,696.92	3,533.30	24.23	21.49	150.05	-961.31	152.85	258.17	222.77	35.40	7.294		
3,800.00	3,554.96	3,803.55	3,627.00	25.03	22.21	150.11	-994.49	158.00	267.81	231.30	36.51	7.334		
3,900.00	3,646.01	3,904.01	3,720.70	25.83	22.90	150.16	-1,027.67	163.14	277.46	239.86	37.60	7.379		
4,000.00	3,737.07	4,004.48	3,814.40	26.63	23.58	150.21	-1,060.85	168.28	287.10	248.41	38.69	7.421		
4,100.00	3,828.12	4,095.05	3,908.10	27.43	24.19	150.26	-1,094.03	173.42	296.74	257.02	39.72	7.471		
4,200.00	3,919.17	4,194.59	4,001.80	28.24	24.87	150.30	-1,127.22	178.56	306.39	265.59	40.80	7.509		
4,300.00	4,010.22	4,294.12	4,095.50	29.04	25.55	150.34	-1,160.40	183.70	316.03	274.15	41.88	7.546		
4,400.00	4,101.27	4,393.65	4,189.19	29.84	26.22	150.38	-1,193.58	188.85	325.68	282.71	42.97	7.580		
4,500.00	4,192.33	4,506.81	4,282.89	30.65	26.99	150.42	-1,226.76	193.99	335.32	291.20	44.12	7.600		
4,600.00	4,283.38	4,592.72	4,376.59	31.45	27.58	150.46	-1,259.94	199.13	344.96	299.83	45.13	7.644		
4,700.00	4,374.43	4,692.25	4,470.29	32.25	28.26	150.49	-1,293.13	204.27	354.61	308.39	46.21	7.673		
4,800.00	4,465.48	4,808.21	4,563.99	33.05	29.04	150.52	-1,326.31	209.41	364.25	316.87	47.39	7.687		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 4AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
4,900.00	4,556.53	4,908.68	4,657.69	33.86	29.73	150.55	-1,359.49	214.55	373.90	325.42	48.47	7.713			
5,000.00	4,647.58	5,009.14	4,751.39	34.66	30.41	150.58	-1,392.67	219.70	383.54	333.98	49.56	7.739			
5,100.00	4,738.64	5,109.61	4,845.09	35.47	31.10	150.60	-1,425.85	224.84	393.19	342.54	50.65	7.763			
5,200.00	4,829.69	5,189.92	4,938.78	36.27	31.64	150.63	-1,459.04	229.98	402.83	351.20	51.63	7.802			
5,300.00	4,920.74	5,289.46	5,032.48	37.07	32.32	150.65	-1,492.22	235.12	412.48	359.76	52.72	7.824			
5,400.00	5,011.79	5,388.99	5,126.18	37.88	33.00	150.68	-1,525.40	240.26	422.12	368.32	53.80	7.846			
5,500.00	5,102.84	5,488.52	5,219.88	38.68	33.68	150.70	-1,558.58	245.41	431.77	376.88	54.89	7.867			
5,600.00	5,193.89	5,588.06	5,313.58	39.48	34.35	150.72	-1,591.76	250.55	441.41	385.44	55.97	7.887			
5,700.00	5,284.95	5,687.59	5,407.28	40.29	35.03	150.74	-1,624.95	255.69	451.06	394.00	57.05	7.906			
5,800.00	5,376.00	5,787.12	5,500.98	41.09	35.71	150.76	-1,658.13	260.83	460.70	402.57	58.14	7.924			
5,900.00	5,467.05	5,886.66	5,594.68	41.90	36.39	150.78	-1,691.31	265.97	470.35	411.13	59.22	7.942			
6,000.00	5,558.10	5,986.19	5,688.38	42.70	37.06	150.80	-1,724.49	271.11	480.00	419.69	60.31	7.959			
6,100.00	5,649.15	6,085.73	5,782.07	43.51	37.74	150.81	-1,757.67	276.26	489.64	428.25	61.39	7.975			
6,200.00	5,740.21	6,185.26	5,875.77	44.31	38.42	150.83	-1,790.86	281.40	499.29	436.81	62.48	7.991			
6,300.00	5,831.26	6,284.79	5,969.47	45.11	39.10	150.85	-1,824.04	286.54	508.93	445.37	63.57	8.006			
6,400.00	5,922.31	6,384.33	6,063.17	45.92	39.78	150.86	-1,857.22	291.68	518.58	453.93	64.65	8.021			
6,500.00	6,013.36	6,483.86	6,156.87	46.72	40.45	150.88	-1,890.40	296.82	528.22	462.49	65.74	8.035			
6,600.00	6,104.41	6,583.39	6,250.57	47.53	41.13	150.89	-1,923.58	301.96	537.87	471.05	66.82	8.049			
6,700.00	6,195.46	6,682.93	6,344.27	48.33	41.81	150.90	-1,956.77	307.11	547.52	479.61	67.91	8.063			
6,800.00	6,286.52	6,782.46	6,437.97	49.14	42.49	150.92	-1,989.95	312.25	557.16	488.17	68.99	8.076			
6,900.00	6,377.57	6,881.99	6,531.66	49.94	43.17	150.93	-2,023.13	317.39	566.81	496.73	70.08	8.088			
7,000.00	6,468.62	6,981.53	6,625.36	50.75	43.85	150.94	-2,056.31	322.53	576.45	505.29	71.17	8.100			
7,100.00	6,559.67	7,081.06	6,719.06	51.55	44.52	150.95	-2,089.49	327.67	586.10	513.85	72.25	8.112			
7,200.00	6,650.72	7,180.60	6,812.76	52.36	45.20	150.96	-2,122.67	332.81	595.74	522.41	73.34	8.123			
7,300.00	6,741.77	7,280.13	6,906.46	53.16	45.88	150.98	-2,155.86	337.96	605.39	530.97	74.42	8.134			
7,400.00	6,832.83	7,379.66	7,000.16	53.97	46.56	150.99	-2,189.04	343.10	615.04	539.53	75.51	8.145			
7,500.00	6,923.88	7,479.20	7,093.86	54.77	47.24	151.00	-2,222.22	348.24	624.68	548.09	76.60	8.156			
7,600.00	7,014.93	7,578.73	7,187.56	55.58	47.92	151.01	-2,255.40	353.38	634.33	556.65	77.68	8.166			
7,700.00	7,105.98	7,678.26	7,281.25	56.38	48.59	151.02	-2,288.58	358.52	643.97	565.21	78.77	8.176			
7,800.00	7,197.03	7,777.30	7,374.95	57.19	49.27	151.03	-2,321.76	363.66	653.56	573.79	79.86	8.187			
7,900.00	7,288.09	7,876.83	7,468.64	57.99	49.95	151.04	-2,354.94	368.80	663.15	582.37	80.95	8.197			
7,982.08	7,362.82	8,397.89	7,829.33	58.65	53.50	175.94	-2,486.27	702.73	593.52	531.75	61.77	9.608			
8,000.00	7,379.16	8,419.99	7,837.35	58.79	53.63	174.99	-2,489.33	723.09	585.22	523.29	61.93	9.450			
8,050.00	7,424.95	8,462.40	7,850.63	59.18	53.90	170.45	-2,494.48	763.03	562.46	498.90	63.56	8.850			
8,100.00	7,470.74	8,485.15	7,856.59	59.53	54.04	163.89	-2,496.84	784.86	541.74	475.75	65.99	8.209			
8,150.00	7,516.17	8,495.41	7,859.01	59.84	54.11	156.49	-2,497.81	794.77	524.34	455.78	68.57	7.647			
8,200.00	7,560.91	8,497.41	7,859.46	60.13	54.12	149.12	-2,497.99	796.71	511.07	440.12	70.94	7.204			
8,250.00	7,604.61	8,493.72	7,858.62	60.38	54.10	142.16	-2,497.65	793.14	502.41	429.47	72.94	6.888			
8,300.00	7,646.94	8,485.99	7,856.79	60.60	54.05	135.68	-2,496.92	785.66	498.61	424.13	74.47	6.695			
8,314.26	7,658.72	8,483.20	7,856.11	60.65	54.03	133.90	-2,496.65	782.98	498.41	423.59	74.82	6.661			
8,350.00	7,687.58	8,475.29	7,854.10	60.78	53.98	129.58	-2,495.85	775.36	499.62	424.09	75.53	6.615			
8,400.00	7,726.22	8,462.35	7,850.61	60.94	53.90	123.74	-2,494.48	762.97	505.20	429.06	76.15	6.634			
8,450.00	7,762.57	8,447.68	7,846.33	61.07	53.81	118.08	-2,492.81	749.05	514.94	438.49	76.45	6.736			
8,500.00	7,796.34	8,431.66	7,841.28	61.18	53.71	112.55	-2,490.85	733.97	528.28	451.72	76.56	6.901			
8,550.00	7,827.28	8,414.56	7,835.45	61.26	53.60	107.14	-2,488.60	718.05	544.62	468.03	76.59	7.111			
8,600.00	7,855.16	8,400.00	7,830.13	61.31	53.51	102.17	-2,486.57	704.65	563.37	486.39	76.98	7.318			
8,650.00	7,879.76	8,377.89	7,821.45	61.35	53.37	96.76	-2,483.27	684.59	583.89	507.04	76.85	7.598			
8,700.00	7,900.90	8,358.61	7,813.28	61.37	53.24	91.91	-2,480.19	667.40	605.68	528.48	77.21	7.845			
8,750.00	7,918.42	8,338.83	7,804.34	61.37	53.12	87.37	-2,476.83	650.08	628.24	550.49	77.75	8.080			
8,800.00	7,932.18	8,318.64	7,794.64	61.35	52.99	83.17	-2,473.20	632.75	651.14	572.64	78.50	8.295			
8,850.00	7,942.07	8,300.00	7,785.17	61.31	52.87	79.48	-2,469.68	617.08	674.00	594.40	79.60	8.467			
8,900.00	7,948.03	8,277.25	7,772.98	61.26	52.72	76.00	-2,465.15	598.42	696.50	615.99	80.51	8.651			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 4AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
8,949.68	7,950.00	8,250.00	7,757.46	61.20	52.54	72.80	-2,459.42	576.77	718.27	637.14	81.13	8.854			
9,000.00	7,950.00	8,235.55	7,748.85	61.14	52.44	72.16	-2,456.25	565.62	740.67	657.65	83.02	8.922			
9,100.00	7,950.00	8,200.00	7,726.53	61.03	52.21	70.56	-2,448.06	539.18	790.08	704.26	85.82	9.206			
9,200.00	7,950.00	8,164.37	7,702.66	60.93	51.97	68.93	-2,439.33	514.23	845.42	757.22	88.20	9.585			
9,300.00	7,950.00	8,134.67	7,681.67	60.85	51.77	67.56	-2,431.69	494.66	906.07	815.47	90.60	10.001			
9,400.00	7,950.00	8,100.00	7,655.99	60.80	51.53	65.96	-2,422.37	473.32	971.48	879.22	92.26	10.530			
9,500.00	7,950.00	8,084.71	7,644.29	60.77	51.42	65.26	-2,418.13	464.44	1,040.79	946.09	94.71	10.990			
9,600.00	7,950.00	8,050.00	7,616.91	60.76	51.18	63.68	-2,408.24	445.54	1,113.93	1,018.22	95.71	11.639			
9,700.00	7,950.00	8,050.00	7,616.91	60.79	51.18	63.68	-2,408.24	445.54	1,189.69	1,091.58	98.11	12.126			
9,800.00	7,950.00	8,027.79	7,598.85	60.86	51.03	62.68	-2,401.72	434.39	1,268.23	1,169.08	99.15	12.791			
9,900.00	7,950.00	8,000.00	7,575.69	60.99	50.84	61.46	-2,393.39	421.49	1,349.23	1,249.45	99.78	13.522			
10,000.00	7,950.00	8,000.00	7,575.69	61.21	50.84	61.46	-2,393.39	421.49	1,431.83	1,330.58	101.24	14.142			
10,100.00	7,950.00	8,000.00	7,575.69	61.56	50.84	61.46	-2,393.39	421.49	1,516.52	1,414.08	102.45	14.803			
10,200.00	7,950.00	7,974.30	7,553.76	62.08	50.65	60.35	-2,385.51	410.64	1,602.23	1,499.51	102.72	15.598			
10,300.00	7,950.00	7,950.00	7,532.63	62.87	50.48	59.32	-2,377.94	401.35	1,689.67	1,586.70	102.97	16.410			
10,400.00	7,950.00	7,950.00	7,532.63	63.95	50.48	59.32	-2,377.94	401.35	1,777.83	1,674.07	103.76	17.134			
10,500.00	7,950.00	7,950.00	7,532.63	65.35	50.48	59.32	-2,377.94	401.35	1,867.18	1,762.75	104.43	17.880			
10,600.00	7,950.00	7,950.00	7,532.63	67.00	50.48	59.32	-2,377.94	401.35	1,957.56	1,852.56	104.99	18.644			
10,700.00	7,950.00	7,929.10	7,514.16	68.85	50.34	58.46	-2,371.33	394.12	2,048.36	1,943.29	105.07	19.495			
10,800.00	7,950.00	7,921.98	7,507.82	70.83	50.28	58.18	-2,369.06	391.83	2,140.04	2,034.67	105.38	20.309			
10,900.00	7,950.00	7,900.00	7,488.07	72.91	50.13	57.30	-2,362.00	385.27	2,232.59	2,127.22	105.38	21.187			
11,000.00	7,950.00	7,900.00	7,488.07	75.07	50.13	57.30	-2,362.00	385.27	2,325.29	2,219.55	105.73	21.992			
11,100.00	7,950.00	7,900.00	7,488.07	77.28	50.13	57.30	-2,362.00	385.27	2,418.56	2,312.52	106.04	22.808			
11,200.00	7,950.00	7,900.00	7,488.07	79.54	50.13	57.30	-2,362.00	385.27	2,512.35	2,406.04	106.31	23.632			
11,300.00	7,950.00	7,900.00	7,488.07	81.83	50.13	57.30	-2,362.00	385.27	2,606.60	2,500.05	106.55	24.464			
11,400.00	7,950.00	7,900.00	7,488.07	84.16	50.13	57.30	-2,362.00	385.27	2,701.27	2,594.51	106.76	25.303			
11,500.00	7,950.00	7,900.00	7,488.07	86.51	50.13	57.30	-2,362.00	385.27	2,796.30	2,689.36	106.94	26.148			
11,600.00	7,950.00	7,879.43	7,469.37	88.89	49.98	56.50	-2,355.33	379.86	2,891.24	2,784.39	106.85	27.059			
11,700.00	7,950.00	7,875.42	7,465.71	91.29	49.96	56.35	-2,354.03	378.89	2,986.73	2,879.78	106.96	27.925			
11,800.00	7,950.00	7,871.64	7,462.25	93.71	49.93	56.21	-2,352.79	378.00	3,082.48	2,975.43	107.05	28.794			
11,900.00	7,950.00	7,850.00	7,442.34	96.14	49.78	55.40	-2,345.70	373.38	3,178.79	3,071.86	106.93	29.726			
12,000.00	7,950.00	7,850.00	7,442.34	98.59	49.78	55.40	-2,345.70	373.38	3,274.87	3,167.82	107.06	30.590			
12,100.00	7,950.00	7,850.00	7,442.34	101.05	49.78	55.40	-2,345.70	373.38	3,371.19	3,264.02	107.17	31.456			
12,200.00	7,950.00	7,850.00	7,442.34	103.52	49.78	55.40	-2,345.70	373.38	3,467.71	3,360.44	107.27	32.327			
12,300.00	7,950.00	7,850.00	7,442.34	106.01	49.78	55.40	-2,345.70	373.38	3,564.42	3,457.06	107.36	33.199			
12,400.00	7,950.00	7,850.00	7,442.34	108.50	49.78	55.40	-2,345.70	373.38	3,661.31	3,553.86	107.45	34.075			
12,500.00	7,950.00	7,850.00	7,442.34	111.01	49.78	55.40	-2,345.70	373.38	3,758.36	3,650.84	107.53	34.953			
12,600.00	7,950.00	7,850.00	7,442.34	113.52	49.78	55.40	-2,345.70	373.38	3,855.57	3,747.97	107.60	35.833			
12,700.00	7,950.00	7,850.00	7,442.34	116.04	49.78	55.40	-2,345.70	373.38	3,952.91	3,845.24	107.66	36.715			
12,800.00	7,950.00	7,850.00	7,442.34	118.57	49.78	55.40	-2,345.70	373.38	4,050.38	3,942.66	107.73	37.599			
12,900.00	7,950.00	7,850.00	7,442.34	121.11	49.78	55.40	-2,345.70	373.38	4,147.97	4,040.19	107.78	38.484			
13,000.00	7,950.00	7,850.00	7,442.34	123.65	49.78	55.40	-2,345.70	373.38	4,245.68	4,137.84	107.84	39.371			
13,100.00	7,950.00	7,850.00	7,442.34	126.20	49.78	55.40	-2,345.70	373.38	4,343.49	4,235.60	107.89	40.260			
13,200.00	7,950.00	7,850.00	7,442.34	128.75	49.78	55.40	-2,345.70	373.38	4,441.39	4,333.46	107.93	41.149			
13,300.00	7,950.00	7,850.00	7,442.34	131.31	49.78	55.40	-2,345.70	373.38	4,539.39	4,431.41	107.98	42.039			
13,400.00	7,950.00	7,850.00	7,442.34	133.88	49.78	55.40	-2,345.70	373.38	4,637.47	4,529.45	108.02	42.931			
13,500.00	7,950.00	7,850.00	7,442.34	136.45	49.78	55.40	-2,345.70	373.38	4,735.64	4,627.57	108.06	43.823			
13,600.00	7,950.00	7,827.08	7,421.08	139.02	49.61	54.57	-2,338.14	369.35	4,833.37	4,725.44	107.93	44.784			
13,700.00	7,950.00	7,825.45	7,419.56	141.60	49.60	54.51	-2,337.60	369.10	4,931.60	4,823.65	107.95	45.683			
13,800.00	7,950.00	7,823.88	7,418.10	144.19	49.59	54.46	-2,337.08	368.86	5,029.90	4,921.92	107.98	46.582			
13,900.00	7,950.00	7,822.36	7,416.69	146.77	49.58	54.40	-2,336.58	368.63	5,128.26	5,020.26	108.01	47.481			
14,000.00	7,950.00	7,800.00	7,395.79	149.36	49.43	53.63	-2,329.16	365.76	5,227.10	5,119.23	107.88	48.454			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 4AH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,100.00	7,950.00	7,800.00	7,395.79	151.96	49.43	53.63	-2,329.16	365.76	5,325.52	5,217.61	107.92	49.349			
14,200.00	7,950.00	7,800.00	7,395.79	154.56	49.43	53.63	-2,329.16	365.76	5,424.00	5,316.05	107.95	50.245			
14,300.00	7,950.00	7,800.00	7,395.79	157.16	49.43	53.63	-2,329.16	365.76	5,522.53	5,414.55	107.99	51.141			
14,400.00	7,950.00	7,800.00	7,395.79	159.76	49.43	53.63	-2,329.16	365.76	5,621.12	5,513.09	108.02	52.037			
14,500.00	7,950.00	7,800.00	7,395.79	162.37	49.43	53.63	-2,329.16	365.76	5,719.75	5,611.69	108.05	52.934			
14,600.00	7,950.00	7,800.00	7,395.79	164.98	49.43	53.63	-2,329.16	365.76	5,818.43	5,710.34	108.09	53.830			
14,700.00	7,950.00	7,800.00	7,395.79	167.59	49.43	53.63	-2,329.16	365.76	5,917.15	5,809.03	108.12	54.727			
14,800.00	7,950.00	7,800.00	7,395.79	170.20	49.43	53.63	-2,329.16	365.76	6,015.92	5,907.76	108.15	55.624			
14,900.00	7,950.00	7,800.00	7,395.79	172.82	49.43	53.63	-2,329.16	365.76	6,114.72	6,006.54	108.19	56.521			
15,000.00	7,950.00	7,800.00	7,395.79	175.44	49.43	53.63	-2,329.16	365.76	6,213.57	6,105.35	108.22	57.418			
15,100.00	7,950.00	7,800.00	7,395.79	178.06	49.43	53.63	-2,329.16	365.76	6,312.45	6,204.20	108.25	58.314			
15,200.00	7,950.00	7,800.00	7,395.79	180.68	49.43	53.63	-2,329.16	365.76	6,411.36	6,303.08	108.28	59.211			
15,300.00	7,950.00	7,800.00	7,395.79	183.31	49.43	53.63	-2,329.16	365.76	6,510.31	6,402.00	108.31	60.107			
15,400.00	7,950.00	7,800.00	7,395.79	185.93	49.43	53.63	-2,329.16	365.76	6,609.29	6,500.95	108.34	61.004			
15,500.00	7,950.00	7,800.00	7,395.79	188.56	49.43	53.63	-2,329.16	365.76	6,708.30	6,599.93	108.37	61.900			
15,600.00	7,950.00	7,800.00	7,395.79	191.19	49.43	53.63	-2,329.16	365.76	6,807.34	6,698.93	108.41	62.795			
15,700.00	7,950.00	7,800.00	7,395.79	193.82	49.43	53.63	-2,329.16	365.76	6,906.41	6,797.97	108.44	63.691			
15,800.00	7,950.00	7,800.00	7,395.79	196.46	49.43	53.63	-2,329.16	365.76	7,005.50	6,897.03	108.47	64.586			
15,900.00	7,950.00	7,800.00	7,395.79	199.09	49.43	53.63	-2,329.16	365.76	7,104.62	6,996.12	108.50	65.481			
16,000.00	7,950.00	7,800.00	7,395.79	201.73	49.43	53.63	-2,329.16	365.76	7,203.76	7,095.23	108.53	66.375			
16,100.00	7,950.00	7,800.00	7,395.79	204.37	49.43	53.63	-2,329.16	365.76	7,302.93	7,194.37	108.56	67.269			
16,200.00	7,950.00	7,800.00	7,395.79	207.01	49.43	53.63	-2,329.16	365.76	7,402.12	7,293.52	108.59	68.163			
16,300.00	7,950.00	7,800.00	7,395.79	209.65	49.43	53.63	-2,329.16	365.76	7,501.33	7,392.70	108.63	69.056			
16,400.00	7,950.00	7,800.00	7,395.79	212.29	49.43	53.63	-2,329.16	365.76	7,600.56	7,491.90	108.66	69.949			
16,500.00	7,950.00	7,800.00	7,395.79	214.93	49.43	53.63	-2,329.16	365.76	7,699.81	7,591.12	108.69	70.841			
16,600.00	7,950.00	7,800.00	7,395.79	217.58	49.43	53.63	-2,329.16	365.76	7,799.08	7,690.36	108.72	71.732			
16,700.00	7,950.00	7,800.00	7,395.79	220.22	49.43	53.63	-2,329.16	365.76	7,898.37	7,789.61	108.76	72.623			
16,800.00	7,950.00	7,800.00	7,395.79	222.87	49.43	53.63	-2,329.16	365.76	7,997.68	7,888.88	108.79	73.514			
16,900.00	7,950.00	7,800.00	7,395.79	225.52	49.43	53.63	-2,329.16	365.76	8,097.00	7,988.17	108.83	74.404			
17,000.00	7,950.00	7,800.00	7,395.79	228.16	49.43	53.63	-2,329.16	365.76	8,196.34	8,087.48	108.86	75.293			
17,100.00	7,950.00	7,800.00	7,395.79	230.81	49.43	53.63	-2,329.16	365.76	8,295.69	8,186.80	108.89	76.182			
17,200.00	7,950.00	7,800.00	7,395.79	233.46	49.43	53.63	-2,329.16	365.76	8,395.07	8,286.14	108.93	77.070			
17,300.00	7,950.00	7,800.00	7,395.79	236.12	49.43	53.63	-2,329.16	365.76	8,494.45	8,385.49	108.96	77.957			
17,400.00	7,950.00	7,800.00	7,395.79	238.77	49.43	53.63	-2,329.16	365.76	8,593.85	8,484.85	109.00	78.844			
17,500.00	7,950.00	7,800.00	7,395.79	241.42	49.43	53.63	-2,329.16	365.76	8,693.27	8,584.23	109.03	79.730			
17,600.00	7,950.00	7,800.00	7,395.79	244.08	49.43	53.63	-2,329.16	365.76	8,792.69	8,683.62	109.07	80.615			
17,700.00	7,950.00	7,800.00	7,395.79	246.73	49.43	53.63	-2,329.16	365.76	8,892.13	8,783.03	109.11	81.499			
17,800.00	7,950.00	7,800.00	7,395.79	249.39	49.43	53.63	-2,329.16	365.76	8,991.58	8,882.44	109.14	82.383			
17,900.00	7,950.00	7,800.00	7,395.79	252.04	49.43	53.63	-2,329.16	365.76	9,091.05	8,981.87	109.18	83.266			
18,000.00	7,950.00	7,800.00	7,395.79	254.70	49.43	53.63	-2,329.16	365.76	9,190.53	9,081.31	109.22	84.148			
18,100.00	7,950.00	7,800.00	7,395.79	257.36	49.43	53.63	-2,329.16	365.76	9,290.01	9,180.76	109.26	85.030			
18,200.00	7,950.00	7,800.00	7,395.79	260.02	49.43	53.63	-2,329.16	365.76	9,389.51	9,280.22	109.29	85.910			
18,300.00	7,950.00	7,800.00	7,395.79	262.67	49.43	53.63	-2,329.16	365.76	9,489.02	9,379.69	109.33	86.790			
18,400.00	7,950.00	7,800.00	7,395.79	265.33	49.43	53.63	-2,329.16	365.76	9,588.54	9,479.17	109.37	87.669			
18,500.00	7,950.00	7,784.39	7,381.14	267.99	49.32	53.10	-2,323.96	364.27	9,687.84	9,578.52	109.32	88.618			
18,600.00	7,950.00	7,783.94	7,380.72	270.66	49.31	53.08	-2,323.81	364.23	9,787.37	9,678.01	109.36	89.498			
18,700.00	7,950.00	7,783.49	7,380.30	273.32	49.31	53.07	-2,323.66	364.20	9,886.90	9,777.51	109.40	90.376			
18,800.00	7,950.00	7,783.06	7,379.89	275.98	49.31	53.05	-2,323.52	364.16	9,986.45	9,877.01	109.44	91.254			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-24.77	0.00	24.77					
100.00	100.00	100.00	100.00	0.13	0.13	180.00	-24.77	0.00	24.77	24.50	0.27	92.133		
200.00	200.00	200.00	200.00	0.49	0.49	180.00	-24.77	0.00	24.77	23.78	0.99	25.127		
250.00	250.00	250.00	250.00	0.67	0.67	180.00	-24.77	0.00	24.77	23.43	1.34	18.427		
300.00	300.00	299.57	299.57	0.84	0.84	16.77	-25.20	0.05	24.78	23.10	1.69	14.702		
400.00	399.93	398.72	398.66	1.19	1.18	18.04	-28.60	0.49	24.88	22.52	2.36	10.540		
500.00	499.68	497.86	497.56	1.54	1.53	20.55	-35.40	1.36	25.10	22.05	3.05	8.221		
600.00	599.13	597.00	596.15	1.92	1.90	24.21	-45.59	2.67	25.53	21.77	3.76	6.791		
700.00	698.15	696.12	694.32	2.32	2.30	28.88	-59.15	4.41	26.26	21.78	4.48	5.857		
800.00	796.63	795.22	791.94	2.74	2.72	34.30	-76.08	6.58	27.40	22.16	5.24	5.228		
900.00	894.44	894.31	888.89	3.20	3.18	40.16	-96.33	9.18	29.07	23.01	6.05	4.801		
1,000.00	991.46	993.37	985.05	3.70	3.67	46.11	-119.90	12.20	31.34	24.39	6.95	4.511		
1,100.00	1,087.58	1,092.40	1,080.31	4.24	4.20	51.86	-146.74	15.64	34.29	26.35	7.94	4.318		
1,200.00	1,182.68	1,191.41	1,174.56	4.83	4.77	57.17	-176.82	19.50	37.94	28.89	9.05	4.191		
1,300.00	1,276.65	1,290.38	1,267.67	5.46	5.39	61.93	-210.10	23.77	42.30	32.01	10.28	4.114		
1,400.00	1,369.36	1,389.32	1,359.53	6.14	6.06	66.08	-246.54	28.44	47.34	35.72	11.63	4.072		
1,471.15	1,434.50	1,460.04	1,424.48	6.66	6.55	68.96	-274.26	32.00	51.21	38.55	12.67	4.043		
1,500.00	1,460.77	1,488.82	1,450.89	6.87	6.76	70.33	-285.61	33.45	52.73	39.62	13.11	4.022		
1,600.00	1,551.82	1,588.59	1,542.44	7.62	7.48	74.51	-324.96	38.50	58.20	43.52	14.67	3.966		
1,700.00	1,642.88	1,688.36	1,633.98	8.38	8.22	77.96	-364.31	43.54	63.92	47.67	16.24	3.935		
1,800.00	1,733.93	1,788.13	1,725.52	9.15	8.95	80.83	-403.65	48.59	69.83	52.01	17.82	3.919		
1,900.00	1,824.98	1,887.90	1,817.07	9.93	9.70	83.25	-443.00	53.63	75.89	56.50	19.39	3.913		
2,000.00	1,916.03	1,987.67	1,908.61	10.71	10.45	85.31	-482.34	58.68	82.07	61.10	20.97	3.914		
2,100.00	2,007.08	2,087.44	2,000.16	11.49	11.20	87.08	-521.69	63.73	88.34	65.80	22.54	3.920		
2,200.00	2,098.13	2,187.20	2,091.70	12.28	11.95	88.62	-561.04	68.77	94.68	70.58	24.10	3.928		
2,300.00	2,189.19	2,286.97	2,183.24	13.07	12.71	89.96	-600.38	73.82	101.08	75.41	25.67	3.938		
2,400.00	2,280.24	2,386.74	2,274.79	13.86	13.46	91.14	-639.73	78.86	107.53	80.30	27.23	3.949		
2,500.00	2,371.29	2,486.51	2,366.33	14.65	14.22	92.19	-679.07	83.91	114.02	85.23	28.79	3.960		
2,600.00	2,462.34	2,586.28	2,457.87	15.44	14.98	93.12	-718.42	88.95	120.54	90.19	30.35	3.972		
2,700.00	2,553.39	2,686.05	2,549.42	16.24	15.74	93.96	-757.77	94.00	127.09	95.19	31.90	3.984		
2,800.00	2,644.45	2,785.82	2,640.96	17.03	16.50	94.71	-797.11	99.05	133.67	100.21	33.46	3.995		
2,900.00	2,735.50	2,885.59	2,732.51	17.83	17.27	95.40	-836.46	104.09	140.26	105.25	35.01	4.006		
3,000.00	2,826.55	2,985.35	2,824.05	18.63	18.03	96.02	-875.80	109.14	146.88	110.32	36.56	4.017		
3,100.00	2,917.60	3,085.12	2,915.59	19.43	18.79	96.59	-915.15	114.18	153.51	115.40	38.11	4.028		
3,200.00	3,008.65	3,184.89	3,007.14	20.23	19.56	97.11	-954.50	119.23	160.15	120.49	39.66	4.038		
3,300.00	3,099.70	3,284.66	3,098.68	21.03	20.32	97.59	-993.84	124.28	166.81	125.60	41.21	4.048		
3,400.00	3,190.76	3,384.43	3,190.22	21.83	21.09	98.04	-1,033.19	129.32	173.48	130.72	42.76	4.057		
3,500.00	3,281.81	3,484.20	3,281.77	22.63	21.85	98.45	-1,072.53	134.37	180.15	135.85	44.31	4.066		
3,600.00	3,372.86	3,583.97	3,373.31	23.43	22.62	98.83	-1,111.88	139.41	186.84	140.99	45.85	4.075		
3,700.00	3,463.91	3,683.74	3,464.85	24.23	23.39	99.19	-1,151.23	144.46	193.53	146.13	47.40	4.083		
3,800.00	3,554.96	3,783.51	3,556.40	25.03	24.15	99.52	-1,190.57	149.50	200.23	151.29	48.95	4.091		
3,900.00	3,646.01	3,883.27	3,647.94	25.83	24.92	99.83	-1,229.92	154.55	206.94	156.45	50.49	4.098		
4,000.00	3,737.07	3,983.04	3,739.49	26.63	25.69	100.12	-1,269.26	159.60	213.65	161.62	52.04	4.106		
4,100.00	3,828.12	4,082.81	3,831.03	27.43	26.46	100.39	-1,308.61	164.64	220.37	166.79	53.58	4.113		
4,200.00	3,919.17	4,182.58	3,922.57	28.24	27.22	100.65	-1,347.96	169.69	227.09	171.97	55.13	4.120		
4,300.00	4,010.22	4,282.35	4,014.12	29.04	27.99	100.89	-1,387.30	174.73	233.82	177.15	56.67	4.126		
4,400.00	4,101.27	4,382.12	4,105.66	29.84	28.76	101.12	-1,426.65	179.78	240.55	182.33	58.21	4.132		
4,500.00	4,192.33	4,481.89	4,197.20	30.65	29.53	101.33	-1,465.99	184.83	247.28	187.52	59.76	4.138		
4,600.00	4,283.38	4,581.66	4,288.75	31.45	30.30	101.54	-1,505.34	189.87	254.02	192.72	61.30	4.144		
4,700.00	4,374.43	4,681.42	4,380.29	32.25	31.06	101.73	-1,544.69	194.92	260.76	197.92	62.84	4.149		
4,800.00	4,465.48	4,781.19	4,471.84	33.05	31.83	101.91	-1,584.03	199.96	267.50	203.12	64.39	4.155		
4,900.00	4,556.53	4,880.96	4,563.38	33.86	32.60	102.09	-1,623.38	205.01	274.25	208.32	65.93	4.160		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 4BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,000.00	4,647.58	4,980.73	4,654.92	34.66	33.37	102.26	-1,662.72	210.05	281.00	213.52	67.47	4.165			
5,100.00	4,738.64	5,080.50	4,746.47	35.47	34.14	102.41	-1,702.07	215.10	287.75	218.73	69.01	4.169			
5,200.00	4,829.69	5,180.27	4,838.01	36.27	34.91	102.57	-1,741.42	220.15	294.50	223.94	70.56	4.174			
5,300.00	4,920.74	5,280.04	4,929.55	37.07	35.68	102.71	-1,780.76	225.19	301.25	229.15	72.10	4.178			
5,400.00	5,011.79	5,379.81	5,021.10	37.88	36.45	102.85	-1,820.11	230.24	308.01	234.37	73.64	4.183			
5,500.00	5,102.84	5,479.57	5,112.64	38.68	37.22	102.98	-1,859.45	235.28	314.77	239.58	75.18	4.187			
5,600.00	5,193.89	5,579.34	5,204.18	39.48	37.98	103.11	-1,898.80	240.33	321.53	244.80	76.72	4.191			
5,700.00	5,284.95	5,679.11	5,295.73	40.29	38.75	103.23	-1,938.15	245.38	328.29	250.02	78.27	4.195			
5,800.00	5,376.00	5,778.88	5,387.27	41.09	39.52	103.35	-1,977.49	250.42	335.05	255.24	79.81	4.198			
5,900.00	5,467.05	5,878.65	5,478.82	41.90	40.29	103.46	-2,016.84	255.47	341.81	260.46	81.35	4.202			
6,000.00	5,558.10	5,978.42	5,570.36	42.70	41.06	103.57	-2,056.18	260.51	348.58	265.69	82.89	4.205			
6,100.00	5,649.15	6,078.19	5,661.90	43.51	41.83	103.67	-2,095.53	265.56	355.34	270.91	84.43	4.209			
6,200.00	5,740.21	6,177.96	5,753.45	44.31	42.60	103.77	-2,134.88	270.60	362.11	276.14	85.97	4.212			
6,300.00	5,831.26	6,277.73	5,844.99	45.11	43.37	103.87	-2,174.22	275.65	368.88	281.37	87.51	4.215			
6,400.00	5,922.31	6,377.49	5,936.53	45.92	44.14	103.96	-2,213.57	280.70	375.65	286.59	89.05	4.218			
6,500.00	6,013.36	6,477.26	6,028.08	46.72	44.91	104.05	-2,252.91	285.74	382.42	291.82	90.60	4.221			
6,600.00	6,104.41	6,577.03	6,119.62	47.53	45.68	104.13	-2,292.26	290.79	389.19	297.05	92.14	4.224			
6,700.00	6,195.46	6,676.80	6,211.17	48.33	46.45	104.22	-2,331.61	295.83	395.96	302.28	93.68	4.227			
6,800.00	6,286.52	6,776.57	6,302.71	49.14	47.22	104.30	-2,370.95	300.88	402.74	307.52	95.22	4.230			
6,900.00	6,377.57	6,876.34	6,394.25	49.94	47.99	104.38	-2,410.30	305.92	409.51	312.75	96.76	4.232			
7,000.00	6,468.62	6,976.11	6,485.80	50.75	48.76	104.45	-2,449.64	310.97	416.28	317.98	98.30	4.235			
7,100.00	6,559.67	7,075.88	6,577.34	51.55	49.53	104.52	-2,488.99	316.02	423.06	323.22	99.84	4.237			
7,200.00	6,650.72	7,175.64	6,668.88	52.36	50.30	104.59	-2,528.34	321.06	429.83	328.45	101.38	4.240			
7,300.00	6,741.77	7,275.41	6,760.43	53.16	51.07	104.66	-2,567.68	326.11	436.61	333.69	102.92	4.242			
7,400.00	6,832.83	7,375.18	6,851.97	53.97	51.84	104.73	-2,607.03	331.15	443.39	338.92	104.46	4.244			
7,500.00	6,923.88	7,474.95	6,943.52	54.77	52.61	104.79	-2,646.37	336.20	450.16	344.16	106.00	4.247			
7,600.00	7,014.93	7,574.72	7,035.06	55.58	53.38	104.86	-2,685.72	341.25	456.94	349.40	107.54	4.249			
7,700.00	7,105.98	7,674.49	7,126.60	56.38	54.15	104.92	-2,725.07	346.29	463.72	354.64	109.08	4.251			
7,800.00	7,197.03	7,774.26	7,218.15	57.19	54.92	104.98	-2,764.41	351.34	470.50	359.88	110.62	4.253			
7,900.00	7,288.09	7,874.03	7,309.69	57.99	55.69	105.03	-2,803.76	356.38	477.28	365.11	112.16	4.255			
7,982.08	7,362.82	7,955.92	7,384.83	58.65	56.32	105.08	-2,836.05	360.52	482.84	369.41	113.43	4.257			
8,000.00	7,379.16	7,973.81	7,401.25	58.79	56.46	101.21	-2,843.11	361.43	483.78	370.07	113.70	4.255			
8,050.00	7,424.95	8,023.79	7,447.11	59.18	56.85	89.91	-2,862.82	363.96	483.43	368.96	114.47	4.223			
8,100.00	7,470.74	8,279.73	7,672.01	59.53	58.86	78.66	-2,960.08	430.18	468.96	360.94	108.02	4.342			
8,150.00	7,516.17	8,450.02	7,797.05	59.84	60.13	68.18	-3,014.86	530.93	433.89	341.32	92.58	4.687			
8,200.00	7,560.91	8,534.44	7,847.47	60.13	60.72	59.02	-3,037.20	594.74	389.78	307.57	82.21	4.741			
8,250.00	7,604.61	8,575.06	7,868.52	60.38	61.00	51.23	-3,046.61	628.18	341.97	265.24	76.73	4.457			
8,300.00	7,646.94	8,592.89	7,877.06	60.60	61.12	44.14	-3,050.44	643.35	292.62	218.35	74.27	3.940			
8,350.00	7,687.58	8,597.83	7,879.35	60.78	61.15	3.52	-3,051.47	647.61	242.70	169.09	73.61	3.297			
8,400.00	7,726.22	8,594.90	7,877.99	60.94	61.13	-139.48	-3,050.86	645.08	192.75	118.68	74.07	2.602			
8,450.00	7,762.57	8,586.86	7,874.22	61.07	61.07	-143.74	-3,049.16	638.19	143.09	67.82	75.27	1.901			
8,500.00	7,796.34	8,575.32	7,868.65	61.18	61.00	-146.32	-3,046.66	628.39	93.95	16.99	76.96	1.221 Level 2			
8,550.00	7,827.28	8,561.28	7,861.63	61.26	60.90	-147.48	-3,043.52	616.66	45.51	-33.53	79.03	0.576 Level 1			
8,597.93	7,854.07	8,546.11	7,853.74	61.31	60.80	-56.52	-3,040.00	604.18	0.57	-72.34	72.91	0.008 Level 1, CC, SF			
8,600.00	7,855.16	8,545.42	7,853.38	61.31	60.80	-9.76	-3,039.84	603.62	2.17	-74.87	77.04	0.028 Level 1, ES			
8,650.00	7,879.76	8,528.17	7,844.03	61.35	60.68	25.34	-3,035.67	589.73	48.73	-34.48	83.21	0.586 Level 1			
8,700.00	7,900.90	8,509.85	7,833.69	61.37	60.55	25.18	-3,031.07	575.33	94.28	8.57	85.71	1.100 Level 2			
8,750.00	7,918.42	8,490.69	7,822.42	61.37	60.42	24.65	-3,026.08	560.66	138.63	50.45	88.18	1.572			
8,800.00	7,932.18	8,470.85	7,810.29	61.35	60.28	24.17	-3,020.71	545.91	181.69	91.05	90.65	2.004			
8,850.00	7,942.07	8,450.00	7,797.04	61.31	60.13	23.82	-3,014.85	530.92	223.38	130.45	92.93	2.404			
8,900.00	7,948.03	8,429.62	7,783.60	61.26	59.98	23.62	-3,008.93	516.78	263.59	168.13	95.46	2.761			
8,949.68	7,950.00	8,408.54	7,769.23	61.20	59.83	23.56	-3,002.61	502.72	302.01	204.26	97.75	3.090			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 4BH - OWB - PROPOSAL 1	Offset Site Error:	0.00 usft
Survey Program:													0-MWD OWSG	Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,000.00	7,950.00	8,387.93	7,754.72	61.14	59.68	23.57	-2,996.24	489.54	340.71	240.82	99.89	3.411			
9,100.00	7,950.00	8,350.00	7,726.93	61.03	59.40	23.59	-2,984.05	466.80	420.72	317.65	103.07	4.082			
9,200.00	7,950.00	8,321.24	7,704.96	60.93	59.18	23.60	-2,974.45	450.93	504.07	398.08	105.99	4.756			
9,300.00	7,950.00	8,300.00	7,688.27	60.85	59.02	23.60	-2,967.17	439.99	590.09	481.62	108.47	5.440			
9,400.00	7,950.00	8,272.59	7,666.21	60.80	58.80	23.60	-2,957.55	426.88	678.11	568.50	109.61	6.186			
9,500.00	7,950.00	8,250.00	7,647.60	60.77	58.63	23.59	-2,949.46	416.95	767.87	657.19	110.68	6.938			
9,600.00	7,950.00	8,236.02	7,635.91	60.76	58.52	23.59	-2,944.38	411.21	858.96	747.09	111.86	7.679			
9,700.00	7,950.00	8,221.02	7,623.22	60.79	58.40	23.59	-2,938.87	405.40	951.17	838.51	112.67	8.442			
9,800.00	7,950.00	8,200.00	7,605.22	60.86	58.24	23.58	-2,931.06	397.87	1,044.40	931.39	113.00	9.242			
9,900.00	7,950.00	8,200.00	7,605.22	60.99	58.24	23.58	-2,931.06	397.87	1,138.25	1,024.26	113.99	9.985			
10,000.00	7,950.00	8,200.00	7,605.22	61.21	58.24	23.58	-2,931.06	397.87	1,233.08	1,118.33	114.75	10.746			
10,100.00	7,950.00	8,175.77	7,584.17	61.56	58.04	23.57	-2,921.94	390.09	1,327.93	1,213.28	114.65	11.582			
10,200.00	7,950.00	8,167.14	7,576.60	62.08	57.97	23.57	-2,918.66	387.56	1,423.53	1,308.57	114.96	12.383			
10,300.00	7,950.00	8,150.00	7,561.46	62.87	57.84	23.56	-2,912.11	382.89	1,519.65	1,404.66	114.98	13.216			
10,400.00	7,950.00	8,150.00	7,561.46	63.95	57.84	23.56	-2,912.11	382.89	1,615.92	1,500.54	115.38	14.005			
10,500.00	7,950.00	8,150.00	7,561.46	65.35	57.84	23.56	-2,912.11	382.89	1,712.62	1,596.91	115.71	14.801			
10,600.00	7,950.00	8,150.00	7,561.46	67.00	57.84	23.56	-2,912.11	382.89	1,809.68	1,693.70	115.98	15.603			
10,700.00	7,950.00	8,150.00	7,561.46	68.85	57.84	23.56	-2,912.11	382.89	1,907.04	1,790.83	116.21	16.411			
10,800.00	7,950.00	8,128.94	7,542.70	70.83	57.67	23.56	-2,904.00	377.83	2,004.16	1,888.13	116.03	17.273			
10,900.00	7,950.00	8,124.19	7,538.44	72.91	57.63	23.55	-2,902.16	376.80	2,101.76	1,985.63	116.13	18.098			
11,000.00	7,950.00	8,119.77	7,534.48	75.07	57.60	23.55	-2,900.45	375.87	2,199.54	2,083.32	116.22	18.926			
11,100.00	7,950.00	8,100.00	7,516.65	77.28	57.44	23.54	-2,892.76	372.12	2,297.73	2,181.68	116.05	19.799			
11,200.00	7,950.00	8,100.00	7,516.65	79.54	57.44	23.54	-2,892.76	372.12	2,395.68	2,279.49	116.19	20.619			
11,300.00	7,950.00	8,100.00	7,516.65	81.83	57.44	23.54	-2,892.76	372.12	2,493.79	2,377.49	116.31	21.441			
11,400.00	7,950.00	8,100.00	7,516.65	84.16	57.44	23.54	-2,892.76	372.12	2,592.05	2,475.64	116.42	22.265			
11,500.00	7,950.00	8,100.00	7,516.65	86.51	57.44	23.54	-2,892.76	372.12	2,690.44	2,573.93	116.51	23.092			
11,600.00	7,950.00	8,100.00	7,516.65	88.89	57.44	23.54	-2,892.76	372.12	2,788.94	2,672.34	116.60	23.920			
11,700.00	7,950.00	8,100.00	7,516.65	91.29	57.44	23.54	-2,892.76	372.12	2,887.54	2,770.87	116.67	24.749			
11,800.00	7,950.00	8,100.00	7,516.65	93.71	57.44	23.54	-2,892.76	372.12	2,986.23	2,869.49	116.74	25.580			
11,900.00	7,950.00	8,100.00	7,516.65	96.14	57.44	23.54	-2,892.76	372.12	3,085.01	2,968.21	116.80	26.412			
12,000.00	7,950.00	8,100.00	7,516.65	98.59	57.44	23.54	-2,892.76	372.12	3,183.87	3,067.01	116.86	27.245			
12,100.00	7,950.00	8,100.00	7,516.65	101.05	57.44	23.54	-2,892.76	372.12	3,282.80	3,165.88	116.92	28.078			
12,200.00	7,950.00	8,100.00	7,516.65	103.52	57.44	23.54	-2,892.76	372.12	3,381.78	3,264.82	116.96	28.913			
12,300.00	7,950.00	8,100.00	7,516.65	106.01	57.44	23.54	-2,892.76	372.12	3,480.83	3,363.82	117.01	29.748			
12,400.00	7,950.00	8,100.00	7,516.65	108.50	57.44	23.54	-2,892.76	372.12	3,579.93	3,462.88	117.05	30.584			
12,500.00	7,950.00	8,078.08	7,496.76	111.01	57.27	23.53	-2,884.18	368.75	3,678.59	3,561.75	116.85	31.482			
12,600.00	7,950.00	8,076.31	7,495.15	113.52	57.26	23.53	-2,883.49	368.51	3,777.71	3,660.84	116.87	32.324			
12,700.00	7,950.00	8,074.61	7,493.61	116.04	57.24	23.53	-2,882.83	368.29	3,876.86	3,759.97	116.89	33.167			
12,800.00	7,950.00	8,073.00	7,492.14	118.57	57.23	23.53	-2,882.19	368.09	3,976.05	3,859.14	116.91	34.009			
12,900.00	7,950.00	8,071.45	7,490.73	121.11	57.22	23.53	-2,881.58	367.89	4,075.28	3,958.35	116.93	34.852			
13,000.00	7,950.00	8,050.00	7,471.13	123.65	57.05	23.52	-2,873.15	365.65	4,174.93	4,058.19	116.74	35.764			
13,100.00	7,950.00	8,050.00	7,471.13	126.20	57.05	23.52	-2,873.15	365.65	4,274.16	4,157.39	116.77	36.602			
13,200.00	7,950.00	8,050.00	7,471.13	128.75	57.05	23.52	-2,873.15	365.65	4,373.43	4,256.62	116.81	37.441			
13,300.00	7,950.00	8,050.00	7,471.13	131.31	57.05	23.52	-2,873.15	365.65	4,472.73	4,355.89	116.84	38.280			
13,400.00	7,950.00	8,050.00	7,471.13	133.88	57.05	23.52	-2,873.15	365.65	4,572.06	4,455.19	116.87	39.119			
13,500.00	7,950.00	8,050.00	7,471.13	136.45	57.05	23.52	-2,873.15	365.65	4,671.42	4,554.51	116.91	39.959			
13,600.00	7,950.00	8,050.00	7,471.13	139.02	57.05	23.52	-2,873.15	365.65	4,770.81	4,653.87	116.94	40.798			
13,700.00	7,950.00	8,050.00	7,471.13	141.60	57.05	23.52	-2,873.15	365.65	4,870.22	4,753.25	116.97	41.637			
13,800.00	7,950.00	8,050.00	7,471.13	144.19	57.05	23.52	-2,873.15	365.65	4,969.65	4,852.65	117.00	42.476			
13,900.00	7,950.00	8,050.00	7,471.13	146.77	57.05	23.52	-2,873.15	365.65	5,069.11	4,952.08	117.03	43.315			
14,000.00	7,950.00	8,050.00	7,471.13	149.36	57.05	23.52	-2,873.15	365.65	5,168.59	5,051.53	117.06	44.154			
14,100.00	7,950.00	8,050.00	7,471.13	151.96	57.05	23.52	-2,873.15	365.65	5,268.09	5,151.00	117.09	44.992			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 4BH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.30usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.30usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 4BH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,200.00	7,950.00	8,050.00	7,471.13	154.56	57.05	23.52	-2,873.15	365.65	5,367.60	5,250.49	117.12	45.831		
14,300.00	7,950.00	8,050.00	7,471.13	157.16	57.05	23.52	-2,873.15	365.65	5,467.14	5,349.99	117.15	46.669		
14,400.00	7,950.00	8,050.00	7,471.13	159.76	57.05	23.52	-2,873.15	365.65	5,566.69	5,449.51	117.18	47.507		
14,500.00	7,950.00	8,050.00	7,471.13	162.37	57.05	23.52	-2,873.15	365.65	5,666.25	5,549.05	117.20	48.345		
14,600.00	7,950.00	8,050.00	7,471.13	164.98	57.05	23.52	-2,873.15	365.65	5,765.84	5,648.60	117.23	49.183		
14,700.00	7,950.00	8,050.00	7,471.13	167.59	57.05	23.52	-2,873.15	365.65	5,865.43	5,748.17	117.26	50.020		
14,800.00	7,950.00	8,050.00	7,471.13	170.20	57.05	23.52	-2,873.15	365.65	5,965.04	5,847.75	117.29	50.857		
14,900.00	7,950.00	8,050.00	7,471.13	172.82	57.05	23.52	-2,873.15	365.65	6,064.66	5,947.34	117.32	51.693		
15,000.00	7,950.00	8,050.00	7,471.13	175.44	57.05	23.52	-2,873.15	365.65	6,164.30	6,046.95	117.35	52.529		
15,100.00	7,950.00	8,050.00	7,471.13	178.06	57.05	23.52	-2,873.15	365.65	6,263.94	6,146.57	117.38	53.365		
15,200.00	7,950.00	8,050.00	7,471.13	180.68	57.05	23.52	-2,873.15	365.65	6,363.60	6,246.19	117.41	54.201		
15,300.00	7,950.00	8,050.00	7,471.13	183.31	57.05	23.52	-2,873.15	365.65	6,463.27	6,345.83	117.44	55.036		
15,400.00	7,950.00	8,050.00	7,471.13	185.93	57.05	23.52	-2,873.15	365.65	6,562.95	6,445.48	117.47	55.870		
15,500.00	7,950.00	8,050.00	7,471.13	188.56	57.05	23.52	-2,873.15	365.65	6,662.64	6,545.14	117.50	56.704		
15,600.00	7,950.00	8,050.00	7,471.13	191.19	57.05	23.52	-2,873.15	365.65	6,762.33	6,644.80	117.53	57.538		
15,700.00	7,950.00	8,050.00	7,471.13	193.82	57.05	23.52	-2,873.15	365.65	6,862.04	6,744.48	117.56	58.371		
15,800.00	7,950.00	8,050.00	7,471.13	196.46	57.05	23.52	-2,873.15	365.65	6,961.75	6,844.16	117.59	59.204		
15,900.00	7,950.00	8,050.00	7,471.13	199.09	57.05	23.52	-2,873.15	365.65	7,061.47	6,943.85	117.62	60.036		
16,000.00	7,950.00	8,050.00	7,471.13	201.73	57.05	23.52	-2,873.15	365.65	7,161.20	7,043.55	117.65	60.867		
16,100.00	7,950.00	8,050.00	7,471.13	204.37	57.05	23.52	-2,873.15	365.65	7,260.94	7,143.26	117.68	61.699		
16,200.00	7,950.00	8,050.00	7,471.13	207.01	57.05	23.52	-2,873.15	365.65	7,360.69	7,242.97	117.72	62.529		
16,300.00	7,950.00	8,050.00	7,471.13	209.65	57.05	23.52	-2,873.15	365.65	7,460.44	7,342.69	117.75	63.359		
16,400.00	7,950.00	8,050.00	7,471.13	212.29	57.05	23.52	-2,873.15	365.65	7,560.20	7,442.41	117.78	64.188		
16,500.00	7,950.00	8,050.00	7,471.13	214.93	57.05	23.52	-2,873.15	365.65	7,659.96	7,542.14	117.81	65.017		
16,600.00	7,950.00	8,040.16	7,462.12	217.58	56.97	23.52	-2,869.27	364.88	7,759.64	7,641.88	117.76	65.895		
16,700.00	7,950.00	8,039.69	7,461.69	220.22	56.97	23.52	-2,869.09	364.85	7,859.41	7,741.62	117.79	66.726		
16,800.00	7,950.00	8,039.24	7,461.28	222.87	56.97	23.52	-2,868.91	364.82	7,959.18	7,841.36	117.82	67.555		
16,900.00	7,950.00	8,029.56	7,452.40	225.52	56.89	23.51	-2,865.10	364.25	8,059.04	7,941.27	117.76	68.434		
17,000.00	7,950.00	8,029.56	7,452.40	228.16	56.89	23.51	-2,865.10	364.25	8,158.81	8,041.01	117.80	69.261		
17,100.00	7,950.00	8,029.56	7,452.40	230.81	56.89	23.51	-2,865.10	364.25	8,258.59	8,140.76	117.83	70.087		
17,200.00	7,950.00	8,029.56	7,452.40	233.46	56.89	23.51	-2,865.10	364.25	8,358.38	8,240.51	117.87	70.912		
17,300.00	7,950.00	8,029.56	7,452.40	236.12	56.89	23.51	-2,865.10	364.25	8,458.17	8,340.27	117.91	71.737		
17,400.00	7,950.00	8,029.56	7,452.40	238.77	56.89	23.51	-2,865.10	364.25	8,557.97	8,440.03	117.94	72.561		
17,500.00	7,950.00	8,029.56	7,452.40	241.42	56.89	23.51	-2,865.10	364.25	8,657.77	8,539.79	117.98	73.384		
17,600.00	7,950.00	8,029.56	7,452.40	244.08	56.89	23.51	-2,865.10	364.25	8,757.58	8,639.56	118.02	74.207		
17,700.00	7,950.00	8,029.56	7,452.40	246.73	56.89	23.51	-2,865.10	364.25	8,857.39	8,739.33	118.05	75.028		
17,800.00	7,950.00	8,029.56	7,452.40	249.39	56.89	23.51	-2,865.10	364.25	8,957.20	8,839.11	118.09	75.850		
17,900.00	7,950.00	8,029.56	7,452.40	252.04	56.89	23.51	-2,865.10	364.25	9,057.02	8,938.89	118.13	76.670		
18,000.00	7,950.00	8,029.56	7,452.40	254.70	56.89	23.51	-2,865.10	364.25	9,156.84	9,038.67	118.17	77.489		
18,100.00	7,950.00	8,029.56	7,452.40	257.36	56.89	23.51	-2,865.10	364.25	9,256.67	9,138.46	118.21	78.308		
18,200.00	7,950.00	8,029.56	7,452.40	260.02	56.89	23.51	-2,865.10	364.25	9,356.50	9,238.25	118.25	79.126		
18,300.00	7,950.00	8,029.56	7,452.40	262.67	56.89	23.51	-2,865.10	364.25	9,456.33	9,338.04	118.29	79.944		
18,400.00	7,950.00	8,029.56	7,452.40	265.33	56.89	23.51	-2,865.10	364.25	9,556.17	9,437.84	118.33	80.760		
18,500.00	7,950.00	8,029.56	7,452.40	267.99	56.89	23.51	-2,865.10	364.25	9,656.01	9,537.64	118.37	81.576		
18,600.00	7,950.00	8,029.56	7,452.40	270.66	56.89	23.51	-2,865.10	364.25	9,755.85	9,637.44	118.41	82.391		
18,700.00	7,950.00	8,029.56	7,452.40	273.32	56.89	23.51	-2,865.10	364.25	9,855.70	9,737.25	118.45	83.205		
18,800.00	7,950.00	8,029.56	7,452.40	275.98	56.89	23.51	-2,865.10	364.25	9,955.55	9,837.05	118.49	84.018		

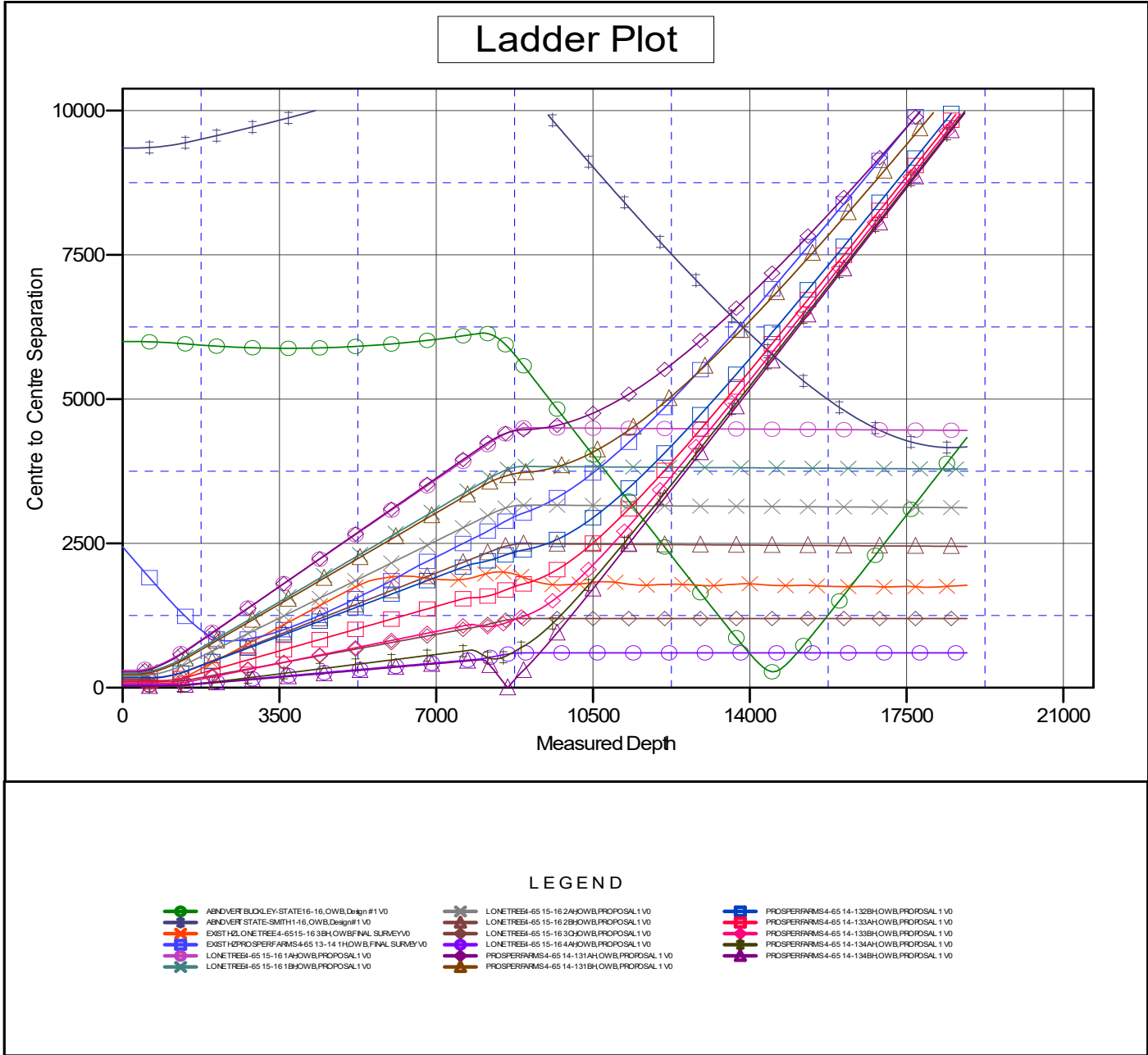
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: CRESTONE PEAK RESOURCES	Local Co-ordinate Reference: Well LONE TREE 4-65 15-16 4BH
Project: ARAPAHOE COUNTY	TVD Reference: KB 25' @ 5718.30usft
Reference Site: SEC 15-T4S-R65W	MD Reference: KB 25' @ 5718.30usft
Site Error: 0.00 usft	North Reference: True
Reference Well: LONE TREE 4-65 15-16 4BH	Survey Calculation Method: Minimum Curvature
Well Error: 0.00 usft	Output errors are at: 2.00 sigma
Reference Wellbore: OWB	Database: EDT_32Bit_ODBC
Reference Design: PROPOSAL 1	Offset TVD Reference: Offset Datum

Reference Depths are relative to KB 25' @ 5718.30usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 105.500000°W

Coordinates are relative to: LONE TREE 4-65 15-16 4BH
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: 0.54°



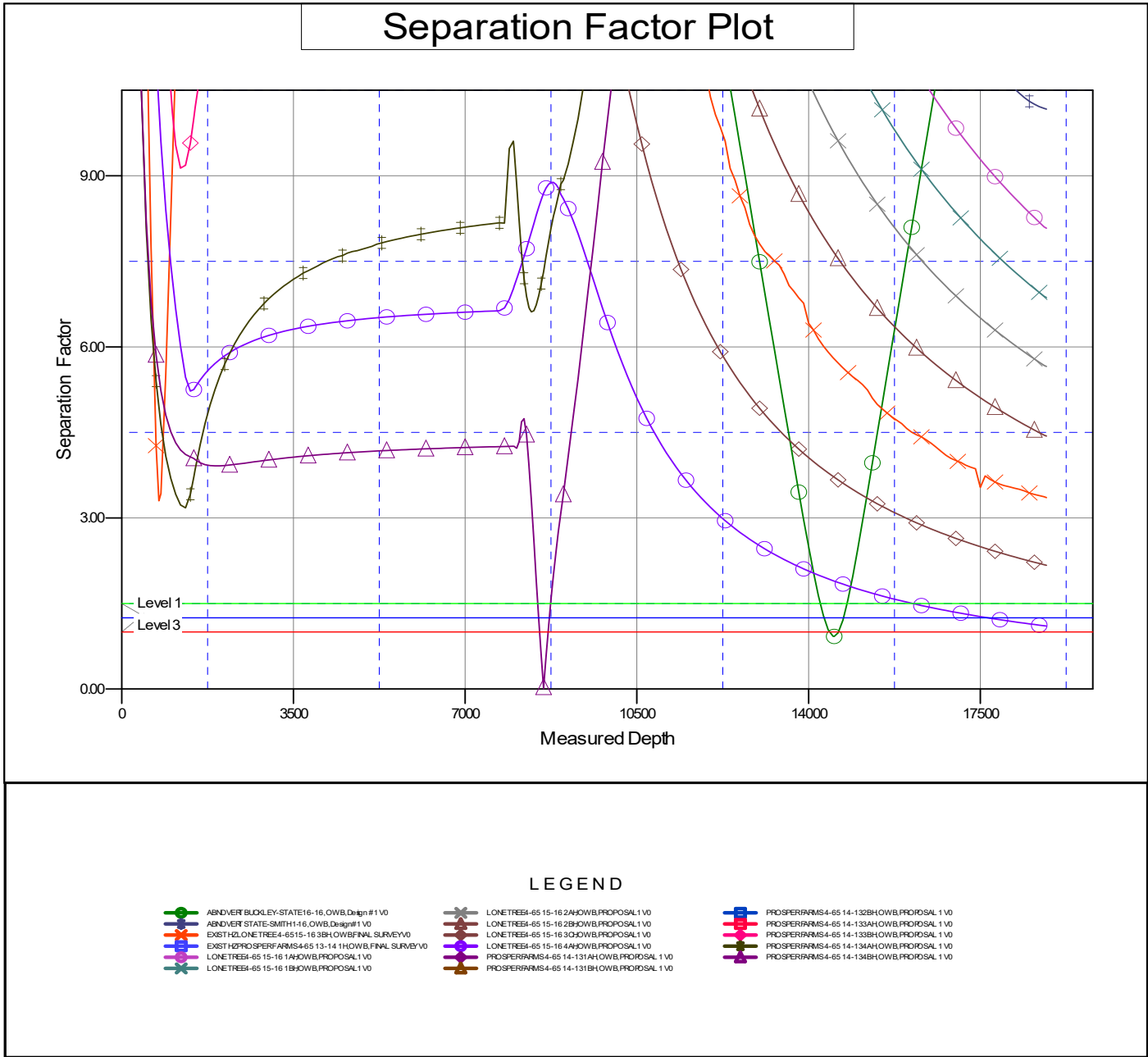
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Anticollision Report

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Reference Wellbore: OWB	Database: EDT_32Bit_ODBC
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Reference Depths are relative to KB 25' @ 5718.30usft
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